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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XXXIII *August, 1929* No. 2

What Is Organized Medicine?*

By EDWIN R. EMBREE

President, Julius Rosenwald Fund, Chicago

MEDICAL service must be considered in terms of the social organization and social needs of to-day. The characteristic of modern life is the interdependence of each group upon all others. The shift of great populations to cities, the use by all of us every day of manufactured articles, parts of which come from diverse sections of the nation and of the world, the consumption of foods grown hundreds or thousands of miles away, all this encourages interdependence. The economic state of one group quickly affects that of all others. Juvenile delinquency and ignorance and crime are harmful to the orderly and law-abiding quite as much as to the lawless. In health, this interdependence is even more direct and striking. Pasteur and Koch showed once for all the contagious character of disease and all recent progress in public health has confirmed the conviction that each individual has a personal interest in the health of all.

In view of the new knowledge and to meet the new conditions medicine has been organizing itself during recent years rapidly and on the whole effectively.

In the first place medical education has been organized. Formerly the student attached himself to a private physician, and serving as house boy and attendant nurse, watched the practitioner, helped him in certain cases and, after a long apprenticeship, finally hung out a shingle for himself and got his further training from the ills of his patients. Later, groups of private physicians established schools. Such courses, offering meager facilities for demonstration or practical instruction and consisting largely in lecture courses to heterogeneous groups of poorly qualified students, flourished in America until fifty years ago.

Recognizing that the education of doctors was

Sound Economics

Hospital authorities must recognize the importance in modern society of the health and welfare of the man of moderate means—the man too poor to give charity and too proud to receive it. Hospitals and clinics should cease to boast of the volume of their charity; they should feel increasingly proud as all their services are organized on a businesslike basis, so that even the low wage earner may pay as he goes for what he gets. This is good democracy and sound economics. It also means increasingly good medical service for all the people.

*Read at the thirty-first convention of the American Hospital Association, Atlantic City, N. Y., June 15-21, 1929.

a public concern, surveys and reports were made, many of the poorest schools were forced out of existence and huge funds from taxes and from private sources were put into the building-up of a relatively small number of true centers of education in this great science and profession. From having fifty years ago probably the poorest average medical schools of any civilized country, America now has the best equipped and most generously supported schools and probably the highest scientific standard in medical education of any nation in the world. This is organized medicine.

Preventive Medicine Program Launched

The second great stride in medical organization has been in public health. We take our state and city departments of health so much for granted that we do not often stop to think how recent is their origin or how great their progress. Public health fifty years ago was simply a matter of quarantine against a few plagues at world ports and attempts to protect against such spectacular contagions as leprosy and small-pox. But as disease came more fully to be seen as a public —not merely a private—matter, the health authorities enlarged their province. Purification of water supplies and disposal of sewage were the great achievements of the generation just past. This was followed by intensive campaigns against animal carriers, rats for plague and mosquitoes for malaria and yellow fever.

To-day the attack is against infections carried directly between individual humans or transmitted by human carelessness. The hookworm campaign, which practically eliminated this enervating disease from the whole South and is doing the same thing for tropical and subtropical regions throughout the world, accomplishes its results by careful handling of all possible sources of infection and by clearing the organisms from individual sick persons. This is a direct recognition that the disease of one individual is a menace to his fellows and that in even so mild an infection as hookworm the individual must be healed if society is to be well. The same kind of attack is being made on the venereal diseases. And to-day public health is not limiting itself to protection against disease but is launching a positive program in education in personal hygiene, proper living conditions, nutrition, child welfare.

These striking instances of organization in medicine for the public weal have brought about lowered death rates and reduced sickness, have benefited the individual and have transformed the health of nations. The fall in the death rate in forty years (1885-1925) from 19.4 to 12.2 for England and Wales, from 25.3 to 11.9 in Germany and from 19.7 to 11.8 in America, is the result. This is organized medicine.

As the third step, the practice of medicine is being organized. With the increase of knowledge, medical science has become so highly specialized that it now takes a group of individuals to perform the services once rendered by the family physician. The complexity of modern medicine has made necessary an increasing capital investment for efficient practice. Diagnosis and treatment of many cases require the use of the x-ray and of chemical, bacteriological and pathological laboratories as well as the assistance of such special aids as anesthetist, laboratory technician, dietitian and nurse. This situation has called into being organizations of medical services and the creation of corporations for the practice of medicine.

Hospitals are characteristic corporations organized for the practice of medicine. Owned and controlled by boards of laymen, operating with a definitely restricted group of physicians and surgeons, these corporations are the rule rather than the exception in the practice of medicine to-day, handling serious or long time sickness in bedrooms or wards and less advanced cases in outpatient clinics.

Century Sees Phenomenal Growth of Hospitals

The recent growth of hospitals and clinics is phenomenal. During the past century, while the population of the United States has somewhat less than doubled, the number of hospitals has increased fifteen-fold, from 150 to over 7,000. During the same period the number of hospital beds has grown from 35,000 to 860,000. Outpatient clinics have increased in much the same fashion in one-third the time. At the end of the past century, the number of clinics in the United States did not exceed 100; to-day there are 6,000. The annual number of visits by patients to clinics has grown in these same thirty years from less than one quarter million to over six millions. The investment in hospitals in the United States is to-day $4,000,000,000 and the annual expenditures for current maintenance is more than $600,000,000. Over 60 per cent of all the registered physicians in the United States have affiliations with hospitals. And where good hospital facilities exist the best physicians are attached to them. This is organized medicine.

If then organized medical practice has made such great strides, why are we discussing the matter? If I am correct in my report of recent progress and present tendencies why is the public not yet satisfied? Chiefly for one reason.

Because, especially in hospital and clinic organization, the largest section of the population has been neglected—that group whom we so often overlook—the middle classes, the patients of moderate means.

The hospital was organized originally for charity. Even before we recognized the interdependence of the various groups of society, we expressed a charitable impulse toward the unfortunate. We established almshouses, relief stations and, in much the same spirit, charity hospitals. Our provisions to-day for the sick poor are so extensive and elaborate that if a pauper can show some acute illness he will be treated like a prince for a week or two in the wards of any one of our thousands of municipal or privately endowed hospitals. Finding most of the best doctors and the best scientific equipment for diagnosis and treatment in these free hospitals, the rich patient began to demand service there, so hospitals began to add pavilions for private patients—where rich men can now get almost as good medical service as paupers!

Charity Is Not Sought

But until recently America's billions of dollars of investment in hospitals and clinics almost completely ignored the patient of moderate means. He was thrown upon the mercies of whatever private physician he could find. And since the middle classes are no longer attached to the soil nor have fixed homes in cities, they have lost touch with the former family physician. When suddenly confronted with sickness these families are increasingly at sea as to where to turn for sound advice and scientific treatment. Many of them fall into the hands of quacks. Certain lucky ones are able to find a general practitioner who will treat this and succeeding illnesses. Others apply to a physician and are refered to a stomach specialist and then to an endocrinologist or a skin specialist and, after losing an appendix and a tonsil or two, go back to work several hundred dollars poorer and as greatly at sea as ever as to what to do when next illness visits them or their families.

Hospitals and clinics to serve their most important function in American life must shift their emphasis from charity to facilities for the patient of moderate means. This middle class man does not want charity. He wants good service so organized as to be available at moderate rates, within the middle class pocketbook. Happily, progress to this end is being made.

One of the most notable examples of organized medical practice is the Mayo Clinic in Rochester, Minn. Here service of the highest standard is given to patients of all classes, with charges regulated to fit capacity to pay. This outstanding example of the pay clinic has had such distinguished leadership in the Doctors Mayo and their associates that even the bitterest critics of organization in medicine have found it convenient to omit it from their general denunciation of such services. Many other groups of physicians have organized for joint service after the general model of the Mayos. In fact there are said to be over 200 formally organized group clinics now operating in this country.

The Cornell Pay Clinic, New York, is an example of an organization set up exclusively for patients of moderate means. In this clinic an excellent medical staff gave treatment to 108,318 patients in 1927, with an average of 6.2 visits per patient at an average cost of $2.29 per visit. At this clinic every patient is charged a fee dependent upon the service rendered. These fees are modest enough to be within the means of relatively poor persons yet they are high enough to cover the cost of the service, including payment to the physicians. Even more important than the low fees is the fact that patients throughout New York are coming to realize that here is a center to which they may turn in case of illness with assurance of competent medical diagnosis and treatment. Similar service is now offered by the clinics of the University of Chicago, which because of high medical standard are attracting patients not only from the Chicago area but from surrounding counties and states.

Pay Clinic Is Attacked

The Public Health Institute, Chicago, is a pay clinic in the special field of venereal diseases. In the few years of its existence this clinic has given approximately 2,700,000 treatments and taken care of over 2,000 patients in one day. It has charged very low fees, yet has covered all its expenses and accumulated a surplus which has been used for research and for maintaining free services for those unable to pay even its small charges. This institute has been the subject of bitter attack by certain elements in the medical profession. It has been hampered in assembling a medical staff due to the action of the County Medical Society in threatening expulsion from the society—and so automatically from the American Medical Association—of any physician who affiliated himself with it. In fact a urologist of national distinction has recently been expelled—with detonations heard throughout the country—simply for having a nominal connection with the institute, as president of the Illinois Social Hygiene League, which receives funds for its chari-

table work from the surplus of the Public Health Institute. It is hard to reconcile the formal charges entered against this eminent physician with the heat shown by the county society in ejecting him.

Not only in out-patient departments, but also in in-patient service, the hospitals are beginning to give more attention to the middle class patient. The semiprivate rooms at moderate fees are a well recognized feature of many of the best hospitals. Just now a great step in this direction has been announced by one of the oldest and most distinguished hospitals in America—the Massachusetts General Hospital, Boston. A new building, the Baker Memorial, is to be devoted exclusively to middle class patients. Not only will room charges be low but, by voluntary act of the eminent medical staff of this hospital, the medical and surgical fees have been established on a definite schedule. These doctors' fees are to be collected, not by the doctor himself, but by the hospital, acting as his agent. And the hospital has the right, when it thinks best, without consulting the doctor to reduce the fee even below the moderate schedule. This is the pay clinic principle applied to hospital service.

Another phase of the cost of medical care to the patient of moderate means is beginning to receive attention. That is the distribution of his medical expenses. The hardship is not only that medical services are high, but that they hit the patient often in a climax of costs at a time when he is not expecting these expenses and has had no chance to prepare for them. Proposals of various forms of health insurance are being made to meet these terrific financial blows which from time to time suddenly beat upon the man of moderate means.

Rapidity of Development Bewilders

This remarkable recent growth in organization of medical services brings up many controversial issues. The very newness and rapidity of the development are confusing to county medical societies and to hospital and clinic authorities.

Physicians, like members of other professions, have worked out rules of conduct. The Hippocratic oath, emphasizing service rather than private gain and safeguarding the privacy of the relation between physician and patient, has been a bulwark of medical ethics. But no code adopted in one age can be treated as inviolable in a new age under new conditions. No physician would feel justified to-day in practicing medicine on the basis of the inadequate scientific knowledge of Hippocrates' time. Neither should he feel justified in following slavishly a code framed to meet economic and social conditions of a primitive era. Medical practice should retain the individual skill and interest of the physician, but individual service to-day must be not individualistic but cooperative. Public health authorities must be free to inform the public plainly of dangers to health; hospitals and clinics must be free to spread knowledge—by paid advertising if necessary—of facilities for adequate medical service.

Likewise hospital authorities must recognize the importance in modern society of the health and welfare of the man of moderate means—the man too poor to give charity and too proud to receive it. Hospitals and clinics should cease to boast of the volume of their charity; they should feel increasingly proud as all their services are organized on a businesslike basis, so that even the low wage earner may pay as he goes for what he gets. This is good democracy and sound economics. It also means increasingly good medical service for all the people.

Is Advance Collection of Hospital Accounts Justifiable?

The advance collection of hospital accounts is justifiable only as a safeguard to prevent individuals from reserving hospital accommodations beyond their means. In other words, hospitals should have some way of keeping patients or their relatives from reserving a room they cannot afford to pay for, according to J. R. Mannix, superintendent, Elyria Memorial Hospital, Elyria, Ohio.

"It has been the experience of many hospitals where payment in advance is asked on private rooms that the patient reserves accommodations within his ability to pay," Mr. Mannix says. "On the other hand who does not resent the advance deposit required by public utility companies? Would the utilities continue this advance charge if they were subjected to open competition, as are other enterprises, and not protected against competition by laws?

"Modern business has found it advisable to extend credit. Hospitals are looked upon as altruistic. Such altruism can well be demonstrated by the proper extension of credit to wage earners or their families who go to the hospital for care at a time when, due to illness, their income is impaired."

Hospital Care Averages $5 a Day in Indiana

The average cost of hospital care in Indiana is $5 a day, authorities who have made a study of hospital costs say. They also say that over the last thirteen years there has been no increase in hospital costs for patients. Although the daily rate is higher due to demand for modern equipment and a high grade of service, the number of patient days in the hospital has been lessened to a considerable extent.

The average daily cost varies in the county hospitals in Indiana. The average daily rate is $2.50 a day.

Roof Vault Provides Safe Storage for X-Ray Films

By GEORGE B. LANDERS, M.D.
Superintendent, Highland Hospital, Rochester, N. Y.

THIS article is written to demonstrate what can be done with existing buildings in the matter of proper storage of x-ray films in the hope that it may serve a useful purpose to some fellow worker now struggling with this problem.

The rather disastrous experience of the Albany Hospital, Albany, N. Y., some years ago caused me to investigate conditions in my hospital with the following results: It was found that a goodly quantity of old films had found their way to the attic of one of the existing buildings and that vast quantities had also become lodged in the basement of still another of the group. Those in the attic were in anything but an orderly condition and yet because they were infrequently referred to, they were not as great a risk as were those in the basement, where not only films were found but supplies of various other kinds not entirely noninflammable in character.

The x-ray department itself had become the depository of an ever increasing amount of films, not all of which were protected in an approved manner. In fact, they had been allowed to accumulate even in the light of the possible harmful consequences that might ensue should the proper conditions present themselves.

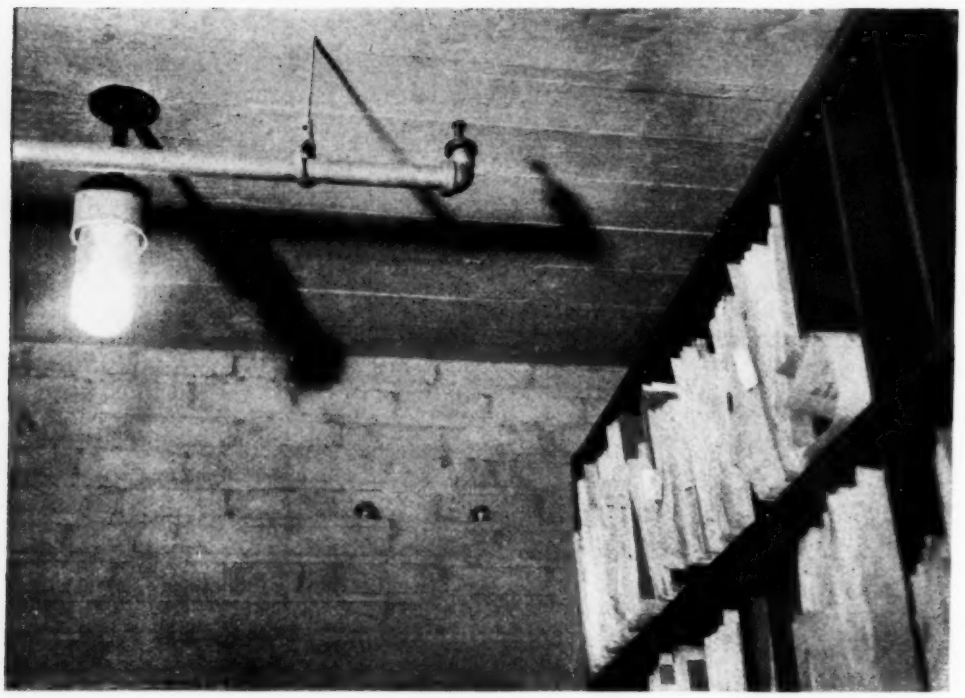
Conditions Are Studied

It was recognized at once that such conditions must not be allowed to continue. Accordingly a study was made to see what could be done toward their correction.

Three questions immediately arose demanding solution—first, the age of the accumulated films, second, their present value from a scientific viewpoint and third, how long the films should be stored from the time they are first used. Examination revealed that in a great majority of cases the age could not be ascertained but that the films probably had long since served their purpose. With these facts in mind and after consultations with those immediately interested, it was finally decided that a hospital might be expected to keep such films for a maximum period of five years, for beyond this period pathological conditions probably would have changed materially, making obsolete what had been revealed primarily.

It was obvious that a vault should be provided, especially since cellulose films were being used. The study was continued to find the proper place for the vault, keeping in mind the cardinal requirements for such a structure. Primarily, it should be fireproof or at least fire-resistive in character. It should be placed where the least possible damage to patients or buildings would result in case of conflagration. It should be properly vented to the open air and yet readily accessible to the x-ray operators in their daily routine and, lastly, it should conform in every regard to the requirements and regulations estab-

The glass covered ventilator on the roof.

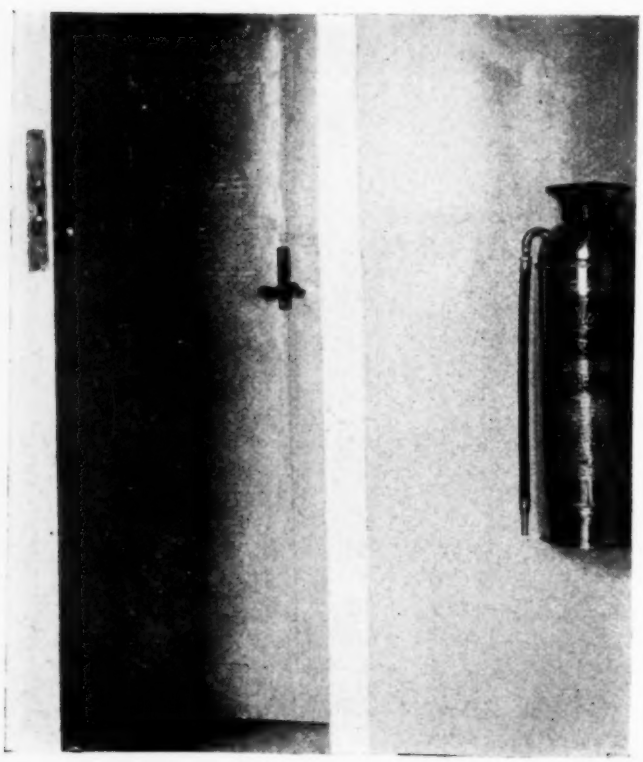


Part of the automatic sprinkler head system is shown in the picture at the left, also one of the vaporproof lamps operated by a switch outside the door of the vault.

lished by the Board of Fire Underwriters.

The basement of the main buildings was immediately eliminated from consideration because it did not conform in any respect to the ideals to be attained. Attention was then directed to the roof as probably being the place of preference, and here was found what has appeared to be the solution of the problem.

Highland Hospital, Rochester, N. Y., is made up of a group of buildings, each three stories and attic in height. These buildings are closely grouped and are connected by passageways and by bays that are only two stories in height. There are areaways of varying sizes between the main buildings just off the corridors above the second story. One of these area spaces, 18 feet wide and 14 feet deep, was in close proximity to the x-ray laboratory. This space offered a probable solution to the local problem provided proper support for any new structure could be assured. Further examination with the help of an architect demonstrated that the outside and inside walls were of sufficient weight to carry the additional load but that the floor of the new building would have to be suspended on steel beams because the existing roof of the bay was not sufficiently strong in itself. One side wall was of suitable thickness—three layers of brick—to allow its use as a wall of the new building, by closing up one existing window, especially as it was a wall of the existing pathological laboratory. The remaining side wall, while of sufficient thickness, was an enclosing wall of a department used by patients and was rejected as a part of the new film structure.



The self-closing double doors are shown above.

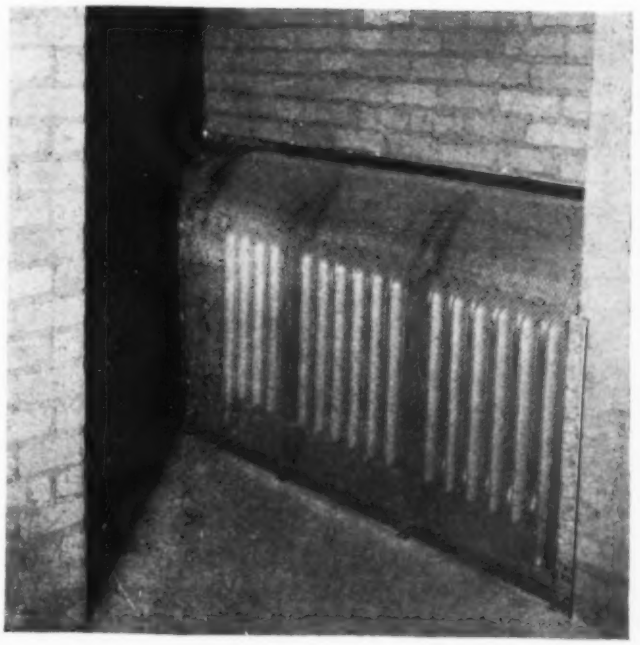
Safety Space Is Provided

It was finally decided that a building, 13′ 3″ by 13′ 3″ by 10′ could be erected, leaving at least a space of 4 feet between the film building and the wall of the patients' building. This space was considered an ample margin of safety should anything of an adverse nature happen in the new structure.

Having located the building to meet the requirements of accessibility and practicability, thought was then given to the item of safety. All walls were constructed of brick, eight inches thick and entirely devoid of openings of any character or any connection with other buildings. The floor, a 4-inch solid reinforced concrete slab, was suspended on steel beams as stated above and pitched from the corridor, opening to a scupper placed in the extreme corner of the building to allow proper drainage to the outside in case of an accumulation of water. The roof, also a continuous 4-inch slab of concrete, was suspended on an iron girder and in its center a ventilator 3′ 6″ in diameter was placed extending high enough to clear the adjacent roofs. The ventilator was constructed to be free and clear of obstruction, and of sufficient size to permit free exit for any gases that might accumulate should film distillation take place, and also to prevent, if possible, any chance of back pressure with its consequent explosion. To guard against this possibility still further, the top of the ventilator was covered with ordinary light plain window glass which would break readily under the slightest pressure from beneath and thus open the ventilator to its extreme capacity.

Sprinkler System Installed

In the room, 13′ 3″ by 13′ 3″ by 10′, four automatic sprinkler heads were installed at equal points of distribution on the ceiling and fed from a direct 2-inch water line connected, without branching of any kind, to the main water supply



The screen covered radiator protects the water lines.

in the basement. Because of the extreme cold often experienced in Rochester some protection for the sprinkler heads and water feed lines was deemed a necessity, and a low pressure radiator was placed in an extreme corner as remote as possible from the films to be stored in the vault. No piping to the radiator was allowed to enter the room, connections being made from the outside. Further to prevent any possibility of films coming in contact with the heat, a curved screen made of stout fine mesh chickenwire, with edges flanged and dovetailed in the wall to prevent any-

The films are loosely stored in separate compartments, all of metal as shown at the right. Storage of any one set of films is limited to five years.

thing slipping through at these points, enclosed the radiator. Metal shelving of the separate compartment type, of sufficient size to permit the films to be stored loosely, was placed 4 inches away from one wall, with the understanding that a limitation of five years was to be placed on the storage of films. The space between the film rack and the wall permitted free access of water from the sprinkler heads.

Vaporproof Lamps Used

To provide lighting, when necessary, two vaporproof lamps of the approved type, connected by a conduit buried in concrete and switched on the outside of the room directly at the left of the entrance door, were installed. This switch is of the pilot light type, showing at a glance whether it is on or off. Approved self-closing inner and outer metal covered underwriters' labeled fire doors were provided, the inner door opening into the room and the outer door into the corridor, both hung and protected by door closers to ensure their being shut at all times. Provision was made to prevent any possibility of wedging or fastening the doors to any other object allowing them to be kept open. A foam type fire extinguisher of two and one-half gallons' capacity was placed adjacent to the handle of the outside door in the corridor for emergency use.

Only Two Keys Provided

Two keys to the room were provided, one for the x-ray operator and the other for the engineer, the only persons who might need to have access to the film vault. This placed the responsibility should the doors be found unlocked or open at any time.

Experience has proved the room adequate for the storage of used and unused films in a hospital of 200 beds to the extent of one and one-half tons, far in excess of the amount ordinarily required but still allowing for expansion beyond present requirements. As soon as the vault was constructed all films, both exposed and new, except a current day's supply, were removed from the x-ray department with the understanding that at the end of each day all films were to be taken to the vault, except the comparatively few exposed films that might be required by the medical men during their evening calls. These are kept in an approved metal film cabinet near a window in the x-ray room.

The result of the expenditure of approximately $1,700 to construct this building immediately reflected itself in a substantial reduction in insurance rating of sufficient proportions to liquidate the original investment within five years.

Promoting Preventive Medicine*

Not a month goes by but new evidence comes to hand of the emphasis that is being placed on preventive as against curative work in the public health field. The old process of allowing Dame Nature to take her course until illness actually lays a person low, is now realized to be wasteful in the extreme, and direct application of modern knowledge of the nature of disease and its symptoms is being advocated by all forward looking members of the medical and allied professions.

To give the laity a better understanding of the principles of medicine is the thought behind a new book entitled "Medical Information in Sickness and Health," by Dr. Philip Skrainka, with a foreword by Dr. W. A. Newman Dorland. This is a book for those who want to know something about medicine in its modern phases so that they may recognize disease, anticipate its progress and thereby avert the danger that results from neglect.

In consecutive chapters the causes and symptoms of ailments are described in simple language so that the reader will not be bewildered by technical terms. In addition to the chapters that deal with specific forms of disease, the following chapters may be mentioned: "The Human Machine"; "The Stoking of the Machine"; "The Care of the Machine"; "Keeping the Machine Fit." In the chapter entitled "Miscellaneous" subjects are featured that are of paramount importance to everyone to-day.

The advances in medical science have in the past few years been too rapid for the slow comprehension and absorption in the mind not medically trained. The public therefore needs a medium through which it may be educated along modern lines of medical treatment and this book may well be the teacher.

Hospital superintendents whose patients ask them to suggest a family health or household medicine book will be interested in perusing "Medical Information in Sickness and Health."

Providing for Medical Care Through Insurance

If the average annual cost of disease and accident per family were evenly distributed over the months and years, it could and would be paid by those who, under present conditions, are unable to meet it, according to Dr. W. S. Rankin, director, hospital and orphan sections, Duke Endowment, Charlotte, N. C., in a paper delivered at a meeting of the American Public Health Association.

Doctor Rankin advocates the insurance principle as a remedy for unanticipated losses, bringing with them financial distress. The insurance principle, he says, avoids these losses by anticipating and apportioning them over long periods of time.

Roanoke Rapids is a splendid example of the application of this principle. Here the mill worker provides for illness in his family by the payment of twenty-five cents a week. Another example is that of the Radcliffe Infirmary, a county hospital of Oxford, England. Under the Radcliffe plan, a family consisting of a man, his wife and children under fourteen years old may receive inpatient and out-patient service for about nine cents a week.

*"Medical Information in Sickness and Health," by Philip Skrainka, M.D., with a foreword by W. A. Newman Dorland, A.M., M.D., F.A.C., Coward-McCann, Inc., New York.

Hospital Planning—A Study of Its Economic Problems*

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THE cost of hospitals is an important item in the social budget. Trade reports show that in the United States alone money is being poured into hospital construction at the rate of approximately a million dollars per day. There is need of a theory of the economics of hospital planning to safeguard these large sums. The great gap between the lowest and highest rates of expenditure for hospital construction warrants the assumption that basic principles are not commonly understood or that they are not uniformly applied.

The first requisite of a theory of the economics of hospital planning is a unit of value. Such a measure is not easily defined. The totality of the service that hospitals render to the sick is the real measure of their value, but such services are of too many kinds to be expressed in a single mathematical term. The service of the hospital is not confined to the occupants of hospital beds. It is widespread, and extends to all those, in or out of the hospital, whose health and welfare are affected by the hospital's teaching and practice. To trace the far-reaching effects of hospital activities is to perceive that hospital planning has many implications, that it is a complicated art, that it involves grave social responsibilities, and that the proper evaluation of the usefulness of a hospital building cannot be made without much study.

If hospital costs vary, so also do hospital values. Whereas a hospital planned and equipped merely for the shelter of the sick, for the administration of simple remedies, for the performance of slight laboratory tests and of routine surgical procedures, may be built at a relatively small cost, one that is generously equipped for research and for teaching requires a much greater outlay. While almost the entire usefulness of the simpler type of hospital is reflected in its statistical report—so many patients, so many days of hospital service rendered, so many complete or partial recoveries, so many patients "unrelieved" (hospitals do not use the word "failure")—a similar statistical report dealing with the activities of the research or teaching hospital tells only half its story, for besides the results just enumerated, the research and teaching hospital contributes values that cannot be statistically summarized. I refer to such valuable contributions as new knowledge of the causes of disease and of effective methods of treatment, together with the education of undergraduate and graduate students of medicine. If the hospital that is designed for research and teaching performs its functions successfully, can one, notwithstanding its high cost, assert that it is the more expensive of the two types, that it costs more in proportion to the service that it renders?

The actual cost of a hospital building is of great practical importance to the building committee. But in a theoretical approach to hospital planning, the mere cost of construction cannot be accepted as the ruling factor. The size or mass of a correctly planned hospital building and the character of its equipment, which basically deter-

The Ultimate Aim

Hospital planning can contribute substantially to medical efficiency by respecting the principles of hygiene in the arrangement of wards, by bringing into close physical relationship departments that are interdependent, by making adequate provision for serviceable technical equipment and by establishing sound working and living conditions for both the resident and the nonresident medical staff. The greatest single contribution which the hospital planner can make to medical efficiency is to foster the development of general hospitals composed of all the clinical and laboratory departments that are logically related to each other in modern clinical practice.

*Read at the International Hospital Congress, Atlantic City, June 13-15, 1929.

mine cost, are not deduced from the treasurer's report of available funds but from functional needs. A logically conceived hospital plan is not one in which a given space or mass is arbitrarily assumed and then subdivided to the best of the architect's ability, but one in which the requirements of the various hospital functions are first studied separately, the forms and space allowances thus ideally conceived for individual departments being afterward put together in the least disadvantageous combination possible.

In approaching the subject of hospital planning certain questions must be put and answered. What are the proper proportions of the parts that go to make up the hospital as a whole? How can these parts be so united—to borrow an analogy from human anatomy and physiology—as to produce as much gland or productive tissue and as little unproductive connective tissue as possible? It is in combining hospital departments into a well proportioned, smoothly functioning and not unduly expensive whole that the hospital planner achieves success or registers failure. He holds in his hands the scales of justice; his mission is one of equity, to the fulfilment of which a penetrating and impartial mind is indispensable.

It is not the purpose of this paper to discuss minutely the multitude of details that enter into hospital planning, although each of these, in a minor degree, influences the cost of both building and maintenance, but rather to consider certain phases of planning that derive their special characters from administrative principles and practice and that influence the cost of construction and affect the hospital's efficiency.

What Affects Cost of Construction?

The cost of hospital building depends chiefly on its mass and arrangement, on the quantity and character of its fixed equipment and on the materials used in its construction. Mass, arrangement and equipment, in an intelligently planned hospital, are determined by administrative principles and are especially appropriate subjects for consideration. The materials used in the general construction of a hospital also affect its cost, but this is a phase of general construction or of domestic economy rather than a special problem of hospital economics.

Given a hospital of a certain capacity, what is its proper mass? Writers have attempted to show that for each hospital bed it is possible to establish a normal mass—so many cubic feet of construction for each bed, and no more. Such a pronouncement cannot be valid because of wide variations in the class or classes of patients sheltered, and because of the range of service performed in hospitals organized for different purposes and upon different lines. Private room service for a given number of patients consumes more space than ward service and one hospital may properly have many private patients, another few or none. As hospitals increase in size, the number of distinctive clinical departments grows, and their differentiation calls for an increase in the ratio of service space to ward space.

In the United States to-day, carefully planned general hospitals range in mass from 8,000 to 16,000 cubic feet of construction (occasionally even more) for each patient's bed, and the higher as well as the lower of these limits has been explained and defended on grounds of administrative policy.

Elements Determining Building Plans

In order to gain a better idea of current hospital practice, I shall discuss as briefly as possible the principal elements that determine the size, mass and cost of a hospital building, and in this discussion I shall confine myself almost entirely to American practice.

In approaching this subject, one thinks first of all of those parts of the hospital that are occupied by patients, of the various types of wards and rooms, and of their relative numbers, cost, purpose and value.

The relative numbers of private, semiprivate and ward patients influence in a marked degree the size of a hospital building of a given bed capacity. While beds occupying single private rooms ordinarily consume more space than an equal number of ward beds, such variations are encountered in the size and arrangement of wards as well as of private and semiprivate rooms that the situation may be reversed if one compares the most generously planned ward with the most economically planned private rooms.

In parts of the United States where hospital planning is regulated by local legislation, the minimum cubic space allowance for patients in public wards is only 800 cubic feet. With the existing tendency to the use of low ceilings, say 10 feet in height, an allowance of 800 cubic feet per patient corresponds to 80 square feet of floor space per bed. American authors usually propose the more liberal standard of 1,000 cubic feet. A private room based on the minimum requirement of 800 cubic feet would measure only 8 by 10 feet, but rooms so diminutive are extremely rare. Rooms 9 feet 6 inches by 13 feet, 10 by 14 feet, 10 by 15 feet and 11 by 16 feet, are more common. De luxe rooms are, of course, larger. These measurements do not include the private or individual toilets or baths that are nowadays so widely used,

not so much for the patient's comfort as to facilitate nursing service.

Often the surprisingly favorable showing of a strictly private hospital, made up entirely of single bedrooms, is due to its restricted incidental requirements, for while, on the one hand, such a hospital requires more space for the mere shelter of its patients, its requirements are relatively contracted in other respects. The strictly private hospital, for example, has no need of a dispensary or of a social service department. Its laboratory program is likely to be a limited one, excluding research, and its intern staff and resident nursing staff are relatively small. Thus increased space requirements in the wards or patients' rooms are counterbalanced by reduced requirements elsewhere.

The greatest space demands are made by hospitals that care for both private and ward patients. Such hospitals provide space consuming private rooms and their accessories, as well as all of the liberal features of a public hospital with respect to scientific investigation, teaching, convalescent care, social service and follow-up work.

Of two possible ward plans, that which presents the smaller mass will usually be the cheaper to build and to maintain, but it does not follow that the plan that goes furthest toward economizing space is the better plan in a functional sense. An examination of the housing of a group of ward patients will make this clear.

Large Open Ward Disfavored

If it is assumed that 80 square feet of floor space is sufficient for a patient's bed in an open ward having the advantage of free exposure and cross ventilation (the legal minimum in parts of the United States), the most economical plan for sheltering 30 such patients would be to place them in a single room say 20 by 120 feet, having a total floor area of 2,400 square feet. Wards of this general character (usually somewhat wider) were at one time common in the United States and elsewhere, but since it is now generally perceived that the environmental needs of all of the patients in a numerous ward group are not constantly the same, and that the separation of certain patients from the main group, (for example, moribund, delirious, infectious and postoperative cases) is desirable, modern hospital wards are frequently split into a number of separate rooms (larger and smaller wards and "quiet" rooms), each of which should be directly accessible from a common corridor. But the greater the subdivision of the ward, the greater the area of the interior corridor, every part of which must be added to the minimum ward area of 2,400 square feet. We have here a case in which increased cost is accompanied by a parallel increase in ward efficiency, justifying the greater outlay. In the United States to-day, the least expensive type of ward, the large open ward of 25 to 30 beds, has few if any advocates. Let us review a fair example of modern American practice in ward planning.

Smaller Units Now Advised

An architect was asked to submit a plan for a double ward of a capacity of fifty patients (25 men and 25 women; or 25 medical and 25 surgical cases, all men or all women). The plan submitted called for a building 275 feet long, with loggias extending from each end. An 8-foot corridor, which penetrated the building from end to end, was placed off center, being flanked by rooms 16 feet wide on one side, and 12 feet wide on the other. A number of larger and smaller projecting balconies were directly connected with the wards. At the center of the stem a side service corridor was placed, into which opened elevators, ward kitchen, central utility room, linen room, nurses' station, treatment room, flower room and cleaners' closet.

Following the modern American trend, the patients were divided into small groups, the largest wards containing four beds each. The space assignments in this ward unit are stated in the accompanying table. A comparison of these details with the details of a 2-story ward building designed by Dr. John S. Billings for Johns Hopkins Hospital, Baltimore, about fifty years ago reveals the influence of changing administrative standards upon ward planning.

Doctor Billings' plan, remarkably advanced for its day, but nevertheless displaying a large open ward of 24 beds as its principal feature, was submitted as a scheme for the wards of Johns Hopkins Hospital and was accompanied by the following note: "The plan is not intended to apply literally to all the pavilions, but only to give a general outline of arangement. I have placed the width of the main ward at 26 feet. If it be made wider, up to 30 feet, it will be better, but the length, 96 feet, must not be diminished."

Doctor Billings evidently thought that he might have been too niggardly in allowing only about 100 square feet of floor space for each patient in a 24-bed ward, but he did not suggest that it might be desirable to split the 24-bed ward into smaller units. He was, however, in advance of his time in including in the ward scheme service small wards—two for patients "who may require separate rooms not on account of acute or dangerous disease but because of nervousness, irrita-

Ward Plan (1928) *Patients' Section* (comprising 2 wards of 25 beds each, all on one floor).		Doctor Billings' Ward Plan (1880) *Patients' Section* (comprising 2 wards of 29 beds each, in a 2-story pavilion).	
(a) *Ward and Separation Rooms*			
8 4-bed wards each	22×16	2 24-bed wards each	96×26
4 2 " " "	11×16	4 2 " " "	21×14
2 2 " " "	14×12	2 1 " rooms "	15×14
6 1 " rooms "	12×12		
(b) *Additional Patients' Accommodations*			
2 loggias each	12×20	Veranda	26×12
6 balconies combined area	6×144	Veranda	26×12
Men's day and dining room	12×16	Dining room	21×14
Women's day and dining room	12×16	Dining room	21×14
Visitors' waiting room	10×16	Common bath and toilets	21×14
Men's common bath and w. c.'s	9×12	(Add cross-ventilated passage or anteroom, 6×8)	
Women's common bath and w. c.'s	9×12	Common bath and toilets (Add cross-ventilated passage or anteroom, 6×8)	21×14
2 individual bath and toilet rooms each	8× 6		
Telephone booth	3× 4		
Service Section			
Central nurses' station (head nurse, medicine supply, etc.)	12×12	Cleaners' closet	4× 6
		Nurses' room	15×14
2 nurses' substations (charting space and supplies) each	7×12	Nurses' room	15×14
Central utility room	11×17		
Central treatment and dressing room	11×17		
2 sink rooms, each	10×12		
Ward kitchen (serving both wards)	24×17	Ward kitchen	16×14
		Ward kitchen	16×14
Linen room	7×10	Closet	8×14
Flower room	6× 8	Closet	8×14
Stretcher and wheel chair closet	6× 8		
Nurses' toilet room	4× 6		
Means of Circulation			
Central Corridor	8×275	Corridor (between auxiliary rooms only)	8×52
		Corridor	8×52
Additional service corridor	10×48	2 lifts each approximately	5× 6
3 elevator shafts each	8×11	2 dumb-waiters "	5× 6
2 stairways "	10×12	Stairway	9×14
Pipe shafts, ducts, etc.	72 sq. ft.	Flue	8 sq. ft.

is reproduced here because it presents an analysis of space or floor allowances pertinent to the present discussion.

The form considered was that of a building 44 feet wide by approximately 200 feet long. The width, 44 feet, represents an 8-foot corridor flanked by two rows of rooms, each of which is 16 feet deep. The additional 4 feet of width is consumed by the walls of the building and by lengthwise partitions. The ground area covered by such a building is 8,800 feet. The free floor area available for service, after allowing for walls and lengthwise partitions, is 8,000 feet, and with a floor-to-floor height of 12 feet 4 inches each story represents 100,000 cubic feet of actual construction.

Those who are familiar with hospital planning will not be surprised at the statement that a very considerable proportion of the available floor area of 8,000 square feet (40 by 200) is utilized for purposes apart from the immediate care of the patients, that is, the actual placing of beds and bed accessories. The 8-foot corridor alone, if extended throughout the length of the building, consumes one-fifth of the total floor space. With the introduction of solarium and veranda, another slice of floor space disappears before the first bed is located. Then come stairways, elevators, elevator lobbies, examining and treatment rooms, toilets, baths, chart rooms, kitchens, utility and sink rooms, linen closets, flower closets, cleaners' closets, supply closets, telephone booths, chutes, ventilating ducts, pipe shafts and perhaps a graduate nurses' sitting and locker room.

A plan embodying all these features in a form not unduly extravagant might consume 1,920 square feet of floor space (the equivalent of 12 rooms each 10 by 16 feet) for stairways, elevators and the whole gamut of service rooms, 800 square feet for solarium and veranda, and 1,440

bility or weak eyes," and one "for acute, febrile and doubtful cases, in which special modifications of light and temperature are desirable." The 1-bed ward, he explained, "when not occupied, might be used by the physician as an examining room."

From this comparison of older and newer "public" ward units, which tells its own story, I shall proceed to a consideration of the utilization of space for the care and service of private and semiprivate patients, and if the foregoing analysis be compared with that which immediately follows, it will be seen that with the subdivision of the large "public" ward into many smaller units, the most striking differences between ward planning and private room planning tend to disappear.

A study of hospital building costs that I presented some time ago to the American Hospital Association deals with a familiar type of hospital building designed for private and semiprivate patients (in contradistinction to "public," "free" or "ward" patients). Part of this study

square feet for the corridor—a total of 4,160 feet, which, deducted from the whole area available, 8,000 feet, leaves only 3,840 feet, equivalent to 24 rooms 10 by 16, each room available for two beds, or 12 wards 20 by 16, each available for four beds. The floor area per bed here allowed is only 80 square feet, and on this basis it would be possible to accommodate 48 ward or semiprivate patients within the assumed area.

For the best type of construction and finish, the cost of such a floor of 100,000 cubic feet (equipment, fees and all incidentals included) would be, in the eastern part of the United States, about $96,000. The basic figure in this calculation is eighty cents per cubic foot for excavation, construction and complete fixed equipment. Since round numbers are always easiest to grasp, let us assume that the cost would be exactly $96,000 or $2,000 per bed, and please note especially that I am not suggesting that a complete hospital of 48 beds can be built in its entirety for $2,000 per bed. We are considering merely the patients' floors of a more or less typical American private and semiprivate hospital of middle grade.

More Divisions Bring Greater Cost

If it is thought advisable to provide a considerable number of separation or quiet rooms, and if the plan is changed so as to provide 16 double rooms and 8 single or separation rooms, the total capacity of the floor will be 40 beds instead of 48, and the cost of construction per bed will be increased to $2,400.

Another possible variation is the utilization of the equivalent of three 10 by 16-foot units, or 480 square feet, for two 2-bed rooms with a connecting semiprivate bath and toilet between them. This latter modification results in the loss of approximately one-third of the possible maximum capacity of the floor (not quite this, since there is some gain from the elimination of public baths and toilets), while the cost of construction per bed rises to approximately $3,000.

Under the most favorable conditions of planning, small single rooms without private baths or toilets would also cost about $3,000 per bed, or perhaps a little more. For a not uncommon type of high class single room construction, providing rooms of liberal size, a fair proportion of private baths and a still larger number of private toilets, the floor area under consideration would yield accommodations for 25 patients, at a cost of $4,000 per bed, while certain highly refined plans of equal area show as few as 20 private rooms, at a cost of $5,000 per bed.

The foregoing calculations are made for the purpose of reflecting a not uncommon type of American hospital building and of affording an opportunity for comparison with the hospital practice of other countries. It is, of course, altogether a matter of administrative program how the available floor area of a given building shall be subdivided, hence the hospital authorities, not the architect, are ultimately responsible for the character of a ward or semiprivate patients' building, its capacity and its relative cost.

It is an elementary principle that costly service features must not be multiplied so freely as to absorb an unduly large proportion of the hospital's capital investment, and yet precisely this error is creeping more and more into American hospital planning. Eagerness to excel in the richness of mechanical equipment has led more than one well intentioned hospital executive to sanction reckless expenditures for fixtures costly to install, troublesome to maintain and insufficiently used to justify their inclusion in the plan.

Attention has already been called to the fact that in the United States to-day, carefully planned hospitals range in mass from 8,000 to 16,000 cubic feet of construction, occasionally even more, for each patient's bed. A partial explanation for these wide variations will be found in the study of space-consuming professional departments that lie beyond the area devoted to the shelter and immediate care and treatment of bed patients.

At this moment, dispensaries or out-patient departments are being planned for two neighboring general hospitals of about 600 beds each. One of these hospitals estimates its dispensary requirements at 200,000 cubic feet. The other demands a dispensary of 500,000 cubic feet. The larger of these two dispensary buildings will be used for undergraduate teaching; the smaller will not.

Out-Patient Service Now Important

The growth of the out-patient department has had a marked effect on the total cost of hospital construction during the past decade. The development has been both quantitative and qualitative. Hospitals that considered out-patient departments unnecessary twenty years ago now find them indispensable. Those that formerly gave rather careless service to out-patients are now disposed to look upon this service in a more serious way and to plan for it much more generously. Thus, in place of a dispensary occupying 14,000 square feet, a hospital in an Eastern city is about to erect a new dispensary building having a total floor area of 80,000 square feet.

Comparable to the expansion of the out-patient service is that of the x-ray department. In place of the single radiographic machine which was the

total equipment of hospitals of from 100 to 500 beds twenty years ago, four, six or eight separate machines are now required for diagnostic and therapeutic purposes. Instead of departments that at one time were content to occupy 300 or 400 square feet, we find modern departments occupying from 3,000 to 10,000 square feet. Incidentally, it may be observed that the construction of the x-ray department with its exacting technical requirements is particularly costly.

The claims of the biologic, chemical and pathological laboratories—departments which, like the x-ray department, are expensive owing to their elaborate technical arrangements—are equally pressing and significant. I have observed closely the growth of laboratory work in a hospital that in twenty-five years has increased in bed capacity from 200 to 600 beds, its laboratories meanwhile advancing in successive steps from a modest beginning of 200 square feet to 4,000 and then to 10,000 square feet. To-day, the 10,000 square feet available is considered far from adequate, and is in fact 50 per cent less than the laboratory space that other hospitals of the same size and scientific pretensions are profitably employing. All of the clinical departments of the hospital now demand laboratory support, in constantly increasing measure. Blind reliance on laboratory procedures and reports may be affecting clinical judgment in a somewhat dangerous manner. If so, this argues not for the curtailment of laboratory activities, but only for the proper application of laboratory findings.

Physiotherapy Departments Expanding

In European hospitals physiotherapy has long held a prominent place. As a rule, the area set aside for this department in American hospitals is not an extensive one. There exists, however, a widespread belief in a future of greatly enhanced usefulness for this department, and on this account prudent planners endeavor to place it strategically, with an eye to its future expansion. The creation of a department for the investigation of medical physics in one of our great medical schools is an event of significance to hospital planning.

Quietly but relentlessly, during the recent period of hospital expansion, surgeons have been increasing the number of their operating rooms so that in place of the single pair of operating rooms that were regularly deemed sufficient twenty years ago for a hospital of 200 beds, hospital architects to-day encounter a demand for five or six such rooms. Hospitals of 500 or 600 beds, formerly content with four operating rooms, now insist upon a dozen.

The principal reasons for this expansion are the multiplication of surgical procedures or the expansion of surgery into new fields and the shortening of surgical convalescence. The hospital which employs a full-time surgical staff is in a position to use its operating rooms far more intensively than is the hospital which is dependent upon surgeons who have an outside practice, but the full-time staff is a rarity in hospitals of the United States. A fairly typical instance of modern operating room planning is that of a 650-bed hospital which has set aside, as a surgical center, a floor area of 14,500 square feet in which there are distributed 13 operating rooms and their associated service rooms. This space does not include the rooms devoted to the preparation and sterilization of surgical dressings, to which an additional space of 2,500 square feet is assigned.

Conference Rooms Necessary

The modern American hospital uses constantly its clinical conference room, and with the introduction of formal and informal postgraduate medical education, other lecture and demonstration rooms are required in ordinary hospitals that are not teaching hospitals in the university sense. In many communities, fortunately for medical science, the cult of the autopsy has taken strong hold, and pathologic material is exhibited not only to the hospital staff, but to invited medical guests for whose accommodation demonstration rooms of suitable size and character must be provided.

A striking example of the manner in which hospital mass grows in conformity with changing administrative methods and ideals is afforded by a study of clinical record rooms. Among the prized possessions of a New York hospital which is now about seventy-five years old, is a series of heavy leather-bound volumes containing the clinical histories of the hospital's earlier years—authentic records of the quaint medical practice and standards of our forefathers. For each clinical history in the 1870's, twenty or thirty sententious lines generally sufficed, notwithstanding the fact that the average period of hospital care at that time was about double what it is to-day.

But an era has dawned in which clinical observations are fortified by numerous laboratory tests, and in which each hospital patient is an object of interest and study not to one clinician but to a group of clinicians, so that the records of individual patients nowadays assume monumental proportions. In the central record room of a moderate-sized hospital the current histories alone embrace many thick volumes, but so active is the practice of statistical research that clinical histories must now be kept in a handy place for

ten or fifteen years from the date of the original records. The sorting, filing and handling of these records call for the employment of a considerable staff for whom working space must be provided, and in the record room or close by, space must be reserved where histories may be assembled by members of the staff engaged in their collation. Concrete cases are perhaps most illuminating and, as in the case of the pathological laboratory, there comes into my mind the example of a hospital that is preparing to set aside for this purpose more than ten times the space that was considered sufficient twenty years ago.

Conspicuous among the forces that have added to the cost of hospital construction is the growth of the department of nursing. Twenty years ago the nursing department of a general hospital expected that accommodations for nurses would be provided in the ratio of one nurse for each three hospital patients. In certain parts of the country to-day the current ratio is one to two, an increase of 50 per cent. Elsewhere hospitals are adopting a ratio of two to three. An advance from a ratio of one to three to a ratio of two to three implies an increase of 100 per cent in the cost of building for the nursing department. Actually the increase has been much greater, for while the number of nurses has doubled, the character of nurses' homes has undergone radical changes. Bedrooms shared by two or more nurses have generally given way to single rooms, narrowly restricted living quarters and scanty recreational facilities have been replaced by accommodations of a far more spacious character, and in place of almost ludicrously inadequate teaching facilities current practice prescribes full-fledged school equipment, including classrooms, laboratories, reference libraries, instructors' offices, assembly and demonstration rooms. The transformation of the school of nursing has now progressed so far that an up-to-date school requires for dormitory, recreational and teaching purposes not less than 4,000 cubic feet for each nurse in place of the former average of 2,000 cubic feet.

Nursing Rooms Greatly Enlarged

Thus we find that changes in administrative practice and standards have necessitated within a twenty-year period the construction, for the purposes of the nursing department, of four times as much space as was formerly required—space for twice as many nurses but in addition twice as much space for each nurse. At the same time, the substitution of fireproof buildings with interior sanitary finish and a multiplicity of plumbing fixtures, for brick or even wooden buildings of a much simpler character, has at least doubled the cost of each cubic foot of construction. Further to accentuate the contrast, there has occurred, as everyone knows, a change in the general price level. And so we find that the capital outlay required to-day for the housing and teaching of nurses in a typical American general hospital is actually from eight to twelve times as much per patient as the sum that was required twenty years ago.

The modern hospital community is a multitudinous one, embracing many groups of high and low degree. Next in importance, in point of numbers, to patients and the nursing group, are the household or domestic employees, whose mode of life is not without its influence on hospital efficiency. The greater the stability of these groups, the better for the hospital and its patients, for the permanent or semipermanent employee acquires an understanding of his job and a sympathy with the purposes of the hospital that are invaluable.

Living Quarters for Domestics

In the United States it is generally true that the domestic worker for whom a comfortable domicile is provided by the hospital is likely to remain longer in the hospital's service than the employee whose sole compensation consists of a meager salary. Hospital dormitories will not on this account commend themselves to the social reformer who is especially interested in the cultivation of normal family life, to which the institutional dormitory is a hindrance, not a help. But here we are considering hospital planning and especially the question of the mass of hospital buildings in relation to the cost of hospital construction and efficiency, and from this point of view we observe that, as experienced hospital administrators turn their thoughts to the question of suitable living quarters for their employees, the use of odd corners of buildings designed for other purposes tends to yield to a strong demand for suitable dormitory buildings which are an asset to hospital administration.

Dormitories for domestic workers differ from those designed for nurses in the more modest size of single bedrooms (when such rooms are employed), in the more frequent use of bedrooms designed for the common occupancy of two or three persons, in a simpler type of finish, in the restricted size of common living and recreation rooms, and in the uniform absence of separate kitchens which are sometimes found in the larger or more isolated nurses' homes. Another distinction, important from the standpoint of building mass, is the fact that while the entire

permanent nursing force of American hospitals is regularly domiciled in hospital buildings, a small fraction of the domestic servant group, a larger fraction of those employees who are engaged about the hospital in mechanical pursuits, and a still larger proportion of clerical workers, laboratory technicians and the like, are not. Notwithstanding these limitations, the dormitories and living quarters of miscellaneous employees and also of the resident medical staff and of certain executive officers make up an item with which the hospital architect must reckon seriously.

The accompanying comparative table represents space allowances that are likely to be found

For 300 nurses (combined school and home for the entire number) ..	1,200,000 cu. ft.
For 300 miscellaneous employees (⅔ to be lodged in the hospital)	600,000 " "
For 30 medical residents or interns	100,000 " "
For executive officers and a number of small special groups (anesthetists, dietitians, etc.)	100,000 " "
Total	2,000,000 " "

in the building program for a hospital of 500 beds.

This would be equivalent to one-sixth of the total cubical contents of a general hospital of a fairly high grade, caring for 500 patients of all social classes (say 250 private and semiprivate patients and 250 ward patients). For the purpose of this calculation I have taken the figure of 12,000 cubic feet of total hospital construction for each patient's bed.

(To be continued.)

Evaluating the Service of the Hospital Social Worker

It behooves any hospital to have a department, however small, whose major concern is the adjustment of the social factors connected with the illness of its patients.

Mrs. Charles W. Webb, director, social service, Lakeside Hospital, Cleveland, thinks that in the many ramifications of relationship into which the social worker will be thrown in conducting her case work, she will create more friends for the hospital, more confidence and more support than may be imagined.

The hospital will not be effective in the community unless its equipment and personnel become matters of vital intimate concern to the poorest ward patient as well as to the wealthiest occupant of a private room.

The social worker is merely trying to revive the old social services of the family physician with the addition of those items of knowledge that have come to the practice of social case work.

What Does the Hospital Do for Its Community?

What does the hospital do for its community? It cares for the sick, of course, but this is only one of the functions of the hospital.

Other functions of the hospital include:

First, the training of doctors. Formerly, doctors just out of medical school hung up their shingle and practiced on the public. They had to learn from their mistakes to apply their theory to the case in hand. Now in order to receive a diploma from the best medical schools they must have two years in actual contact with the sick under the guidance of the trained physician and surgeon. They can learn to apply their theory to the case in hand. They have one year in their senior college year, and one afterwards as an intern in a hospital. This gives them the real picture of the disease.

Second, the training of nurses. Before the days when Florence Nightingale lighted her lamp and went about the care of the wounded and sick at Crimea, there were no trained nurses. Victims of accidents had to be carried into the homes by the wayside, and depend on volunteers to nurse them back to health and strength. What would have happened in the World War, had there not been at the disposal of the military leaders trained nurses who came when summoned to care for the wounded and sick?

Without the training of nurses there would be no private duty nurses. There would be none for public health service, none for child welfare, none for industrial nursing, none to man the institutions of the country.

Third, hospitals do their part in the control and prevention of disease in our country. They stand at the crossroads of life ready at all times to attack epidemics that threaten the welfare of the people. Time was when epidemics swept this country from the Atlantic to the Pacific, taking their toll of thousands each year. Every town had its smallpox epidemic. The South every year buried its hundreds and thousands who had died with yellow fever. Cholera making its way into this country from the ships that brought spices and fine silks from the Orient, swept across the country, taking a mighty toll of victims. To-day, hospitals manned with doctors and nurses are doing their utmost to make such epidemics impossible. The only one serious epidemic in recent years was the influenza epidemic of 1917 and its spread was largely due to the fact that the nurses and doctors were in Europe and the hospitals were undermanned.

Hospitals are giving the people of their communities protection against disease and its spread. It is necessary that it be able to serve all classes of people—the poor for little or nothing and the average citizen for an amount that he can pay. It is an expensive service to operate because it must be ready every minute of every day and every day of every year to give what is called for.

A hospital is just as good as the people who live about it and support it.—*By Mary Elizabeth Lewis, R.N., Superintendent, Englewood Hospital, Englewood, N. J.*

Italian Influence Is Seen in New Battle Creek Addition

By CHARLES E. STEWART, M.D.
Associate Director, Battle Creek Sanitarium, Battle Creek, Mich.

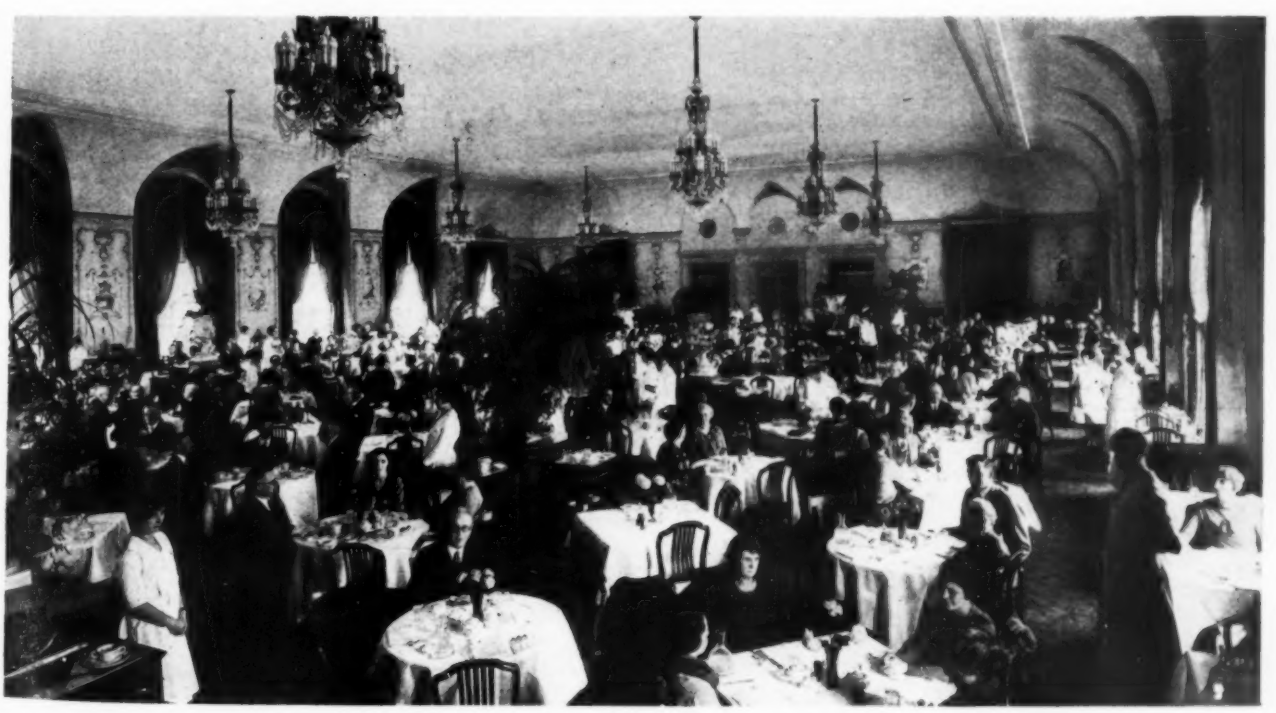
THE new fifteen-story addition to the Battle Creek Sanitarium, Battle Creek, Mich., is now finished and service in all departments is fully established.

The Battle Creek Sanitarium has grown and expanded until its properties now number more than seventy-five buildings and cover fifty acres of beautifully landscaped ground. The addition practically doubles the first-class accommodations of the institution and adds impressively to the group of other large units, such as the former six-story main building, the modern seventy-bed hospital, the large new gymnasium and recreational building, and the various halls, dormitories and maintenance plants. The new power plant and model creamery harmonize with the beauty of the other buildings.

The new building, viewed from any angle, is of unusual architectural beauty. It points majestically into the sky and is the first structure that comes into view as one nears Battle Creek by train or motor. The building is of steel and concrete construction, fire resistive, and is faced with buff brick to harmonize with the former main building, which it adjoins. One of its features is the colossal colonnade which extends the full length of the building. Another feature is a pergola promenade on the roof where breezes from the inland lakes may be enjoyed during the summer months. From the roof promenade the guests may enjoy a panoramic view of the surrounding country with its rich foliage, the well kept farm lands and the winding roads that are visible for many miles in all directions.

The grounds surrounding the addition have been attractively landscaped with sixty varieties of trees and shrubs.

Skillful architects and decorators have combined to make the lobby of this building a place of beauty and interest. Here twelve large mankato marble pillars extend from floor to ceiling. At this particular point the ceiling height is two

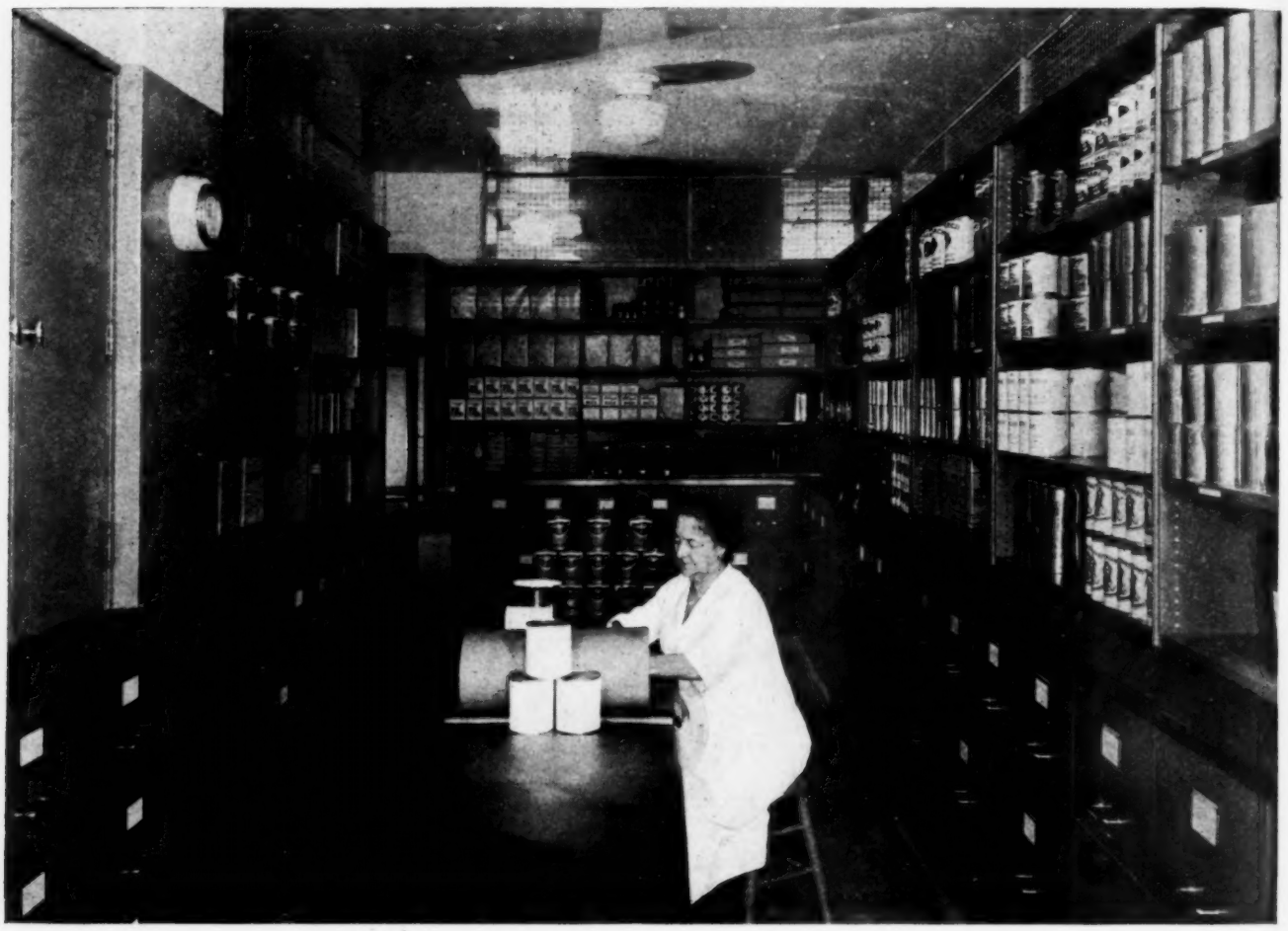


Hand painted murals adorn the walls of the Venetian dining room.

floors. Across the lobby are the clerks' and the cashiers' desks. Check, telegraph and telephone rooms are also on this floor. Two large marble clocks grace the walls. Two lighting fixtures shaped like huge lanterns hang from the center ceiling. The general treatment of the lobby is late Italian Renaissance, while the lighting fixtures, ceiling and draperies have a strictly Northern Italian aspect. The ceiling is Florentine, having an Italian walnut background ornamented with gold and other rich colors.

The oriental rugs in the lobby are probably the first of their kind introduced into this country because the particular patterns used with crown motifs were seen only in royal palaces, and it was formerly against the Asiatic laws to export them. The pedestals of the two main tables are from the Rothschild collection of London, and, in keeping with all other furniture in the lobby, are along Italian lines. Some of them are copies of well known pieces.

To the right is the women's lounge about which lingers an air of the beauty and restfulness of the eighteenth century. All the colors are soft and harmonious. Two beautiful consoles dominate the north wall. The draperies are of large pattern glazed chintz in Adams design and have soft colored valances. Around the room is a hand painted frieze of classical subjects. To the left is the men's lounge. It is done in early Italian Renaissance style. The beams are of old oak and around the room is a fresco frieze from which is hung Italian red damask. The floor is black and gray with brass inlays. The center table is a copy of one in the Davazatti palace in Florence. The cabinets are also copies of well known historical pieces. The whole atmosphere of this room is one of quiet elegance. For the mezzanine floor an unusual indirect lighting scheme has been adopted. Here, as in the main lobby, Italian Renaissance treatment predominates and is carried out in the furniture, draperies and carpets.



Kitchen supplies are arranged conveniently in this storeroom.

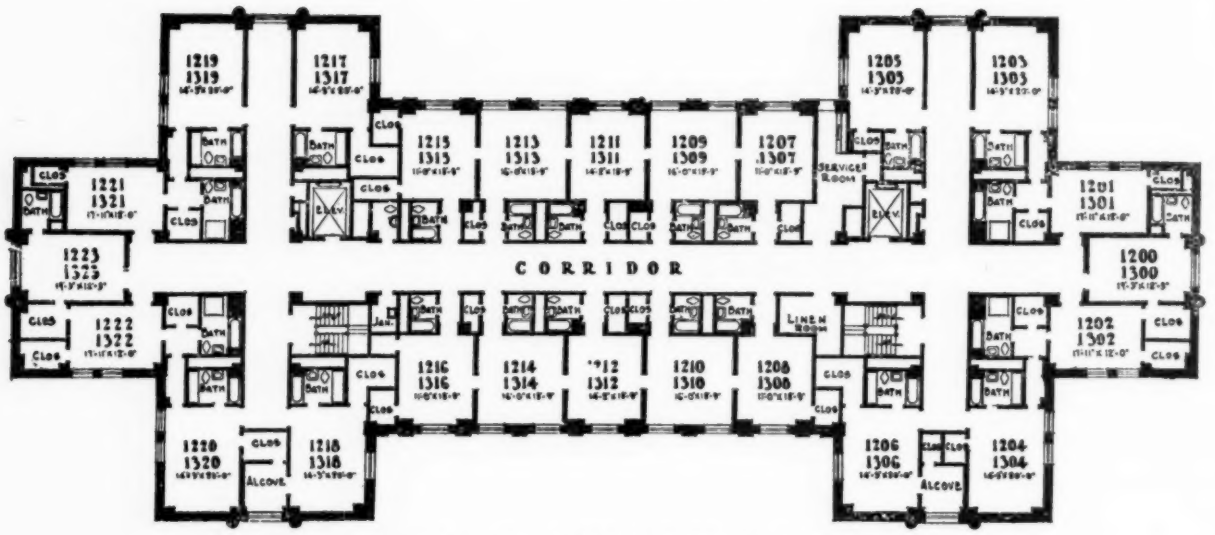
There are 268 guest rooms on the twelve floors used for this purpose and more than a hundred of these rooms have alcoves that can be used for fresh air sleeping. All rooms have private baths with showers, while some of the larger suites have private treatment rooms adjoining. Treatment facilities are convenient for all guests as each

Restful furnishings feature the private bedrooms, all large and airy.

of the guest room floors is equipped with a special treatment department.

The rooms are inviting, restful and homelike. The furnishings as well as the color schemes and lighting arrangements were carefully studied to achieve this result. The overhead fixtures produce a soft light which is so diffused as to be shadowless. The new rooms planned for women guests have ample clothes closets, large mirrored vanity dressers and comfortable beds. Rooms for men guests are provided with comfortable rest chairs, cheerful bridge lamps and well equipped bathrooms. A number of special conveniences have been provided, including automatic heat control, pure washed air ventilation and special glass windows that transmit the ultraviolet rays of the

Cooking equipment is kept shining in all of the sanitarium kitchens.



The plan above shows how the twelfth and thirteenth floors are arranged.

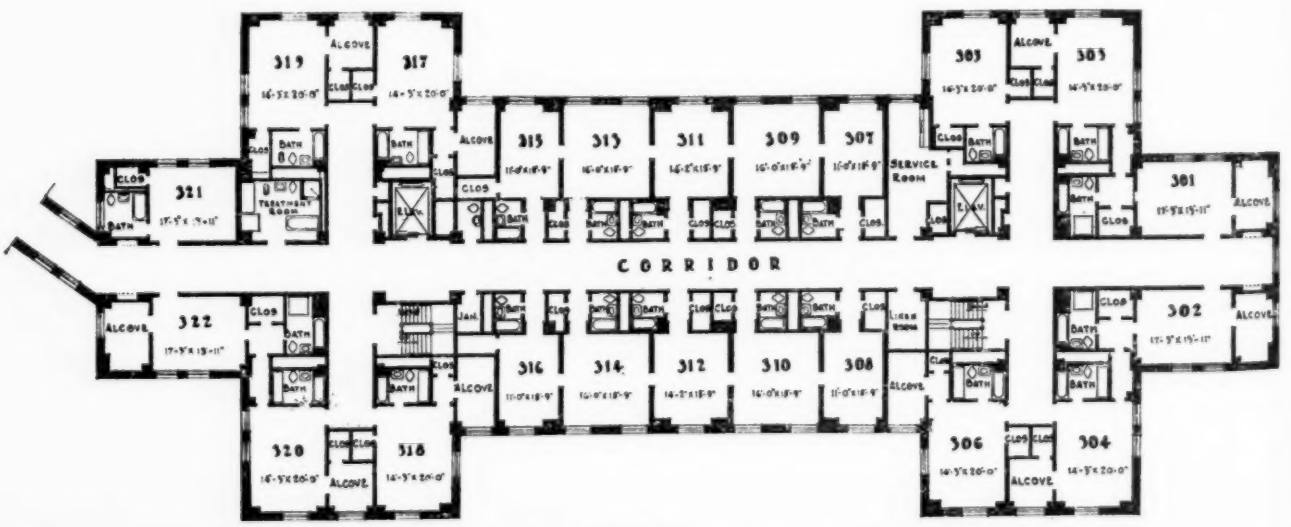
sun. Every room is supplied with running ice water for drinking purposes. This is purified by ozone through newly devised machinery installed in the basement.

The corridors leading to the guest rooms are light and airy and are heavily carpeted. Ample elevator facilities have been provided.

Extending from the rear of the building is a large wing of four floors. Here are the Venetian dining room, private dining rooms and banquet hall with a seating capacity for nearly a thousand guests. This building is connected with the main building by a foyer and is reached from the mezzanine of the general lobby. Forty hand painted murals that adorn the walls of the Venetian dining hall are a remnant of the Indo-Chinese art which penetrated into Italy at the close of the eighteenth century.

The hangings are of apricot velvet embroidered in gold over an antique green taffeta. The tables and chairs, arranged in square formation for parties of two, four and six, are of hand carved walnut. An interesting feature of the Italian chairs is the incorporation of a specially designed back for comfort and for correct posture. There are twelve Italian pedestals of walnut and gold, topped with Italian marble. On each of these, resting on a square base of Verona marble is an urn of refined old white terra cotta containing a stately palm. Grouped around each of the pedestals are the serving tables of hand carved walnut with Italian marble tops.

The fountain that graces the center of the room was brought from Naples, Italy. It is built in three tiers with three columns of water and is controlled by the electric flasher system. Its outer walls are surrounded by flower boxes in which are hidden colored electric lights. The room is made brilliant by indirect cove lighting and by eight large bronze cut chandeliers in sunburst



Rooms from the second to the eleventh floors are arranged as shown above.

design. There are 100 lights in each chandelier and several hundred in the cove lighting.

Two private dining rooms of early American design adjoin the main dining hall. The walls are paneled in an effect of southern pine and the quaint pewter chandeliers resemble old-fashioned hanging lamps. The windows are curtained in chintz and blocked linen. One room is in rose and the other in blue. The furniture is in keeping with that of the main dining hall and banquet hall. These private dining rooms are popular for small social gatherings and seat from twenty to fifty guests.

To satisfy the social demands of the institution, there is a formal banquet hall on the floor above the main dining hall. The French Renaissance influence is seen in this room, with its heavily beamed ceiling ornamented with gold and silver, its wood carved cornices, its rare murals of floral design framed by gold damask curtains, its stately windows and its richly carpeted floors. The room has a seating capacity of 300 persons.

Kitchen Equipment Especially Fine

The new sanitarium kitchens are complete in their equipment and enhance the reputation that the Battle Creek Sanitarium has held for many years for its system of dietetics. The walls are of cream tile, the ceilings of vitreous slabs and the floors of terrazzo, the only color being the apple green metal trimmings. The monel equipment used throughout was especially designed to meet the institution's individual needs. On the ground floor is the room service department, with its electric ranges and refrigerated counters and steam tables for the preparation of room trays. Several hundred trays are sent out from this section daily. The special diet kitchen for diabetic and other minutely regulated dietaries is on this floor. Here the smallest portion of food must be carefully weighed before being served. The pastry kitchen with its six-compartment electric ovens, each independently regulated, is an interesting place. The experimental kitchen, where an expert dietitian is constantly experimenting with new dishes, is another of the ground floor kitchens. The vegetable room, arranged with a maximum of daylight, is equipped with twelve tanks and provides every facility for the thorough cleansing and disinfecting of uncooked vegetables.

On the first floor of the service building is the main kitchen. The equipment has been arranged in duplicate to provide for the quick and efficient handling of the extra demands. The electric ranges are augmented by gas ranges, and electric refrigeration by brine refrigeration. The refrigeration tables for salads, relishes, fruits and similar foods are in duplicate as are also the steam tables. In the center are the beverage tanks, three 100-gallon tanks lined with blue glass and expertly refrigerated. There is a special egg poacher with a capacity for poaching 200 eggs at one time; there are also gas and electric toasters.

On the second floor of the wing is the banquet kitchen, entirely independent of the main kitchen. It is equipped with steam tables, electric ovens, gas and electric ranges, refrigerated counters and portable urns. Aluminum ware is used throughout the kitchen. Supplies are carried by electric conveyors from one floor to another. The employees of the kitchens and tray rooms are always immaculately dressed in freshly laundered white uniforms.

Hospital Is Aid to Medical School in Clinical Teaching

A service that is carried on not only for the benefit of the state but as a means of enabling medical students to observe practical physicians at work is that conducted by the University of California at the main clinic of the university medical school and at the San Francisco City Hospital.

A report from one of these clinics alone shows that in the last ten years almost a thousand people of the state without funds have been treated for eye conditions that, without treatment, would surely have resulted in blindness.

In the city hospital 300 cases of eye inflammation, due to gonorrhea in the newborn, were treated; at the university there were treated 105 cases of glaucoma; ten cases of trachoma, ninety cases of inflammation of the cornea and 110 cases of inflammation of the iris; 325 cataracts were removed and thirty cases of congenital cataract were relieved.

The faculty members of the medical school do this clinical work without pay. If the time given to the relief of the thousands of people treated were computed at the low figure of $5 an hour, it would total $75,000 to the present time.

Future Makers of Nursing History in Foreign Countries

Twenty students from foreign countries registered in the Department of Nursing Education, Teachers College, Columbia, New York City, at the beginning of the present school year. These various students differ greatly in their specific needs and interests, an article in the *Public Health Nurse* points out, but they are markedly similar in their thirst for practical knowledge that may be applied to their home problems.

Some will return to administer hospitals or to teach in newly developed training schools. Others will develop public health nursing services, visiting nursing, hospital social service and municipal health work. All are the future makers of nursing history in their parts of the world.

Analyzing Public Criticism of the Hospital*

By DONALD M. MORRILL, M.D.
Director, Blodgett Memorial Hospital, Grand Rapids, Mich.

FOR this review of recent magazine criticisms of hospitals, twenty-seven articles were discovered and read in magazines other than medical and hospital journals. All of these articles, nineteen of which are listed in the bibliography following this review, dealt in some way with hospital experience. After a careful study of each article I am more than ever convinced of the hopelessness of attempting to translate the complex life story of a modern hospital into terms the passer-by can understand. Years of study are necessary and volumes must be written before hospitals will be fully understood and appreciated by the public they serve.

These twenty-seven magazine discussions dealt mainly with the cost of medical and hospital service, a few were frank criticisms of hospitals and one was actually an appreciation. They include two careful studies by competent and informed authors and two replies from physicians, but no direct word from the hospitals themselves. It is time that we searched the field for our own Demosthenes to find a spokesman with the courage, the knowledge and the ability to place the splendid work of our hospitals squarely and clearly before the people through the pages of their own fireside journals. Here is a task for the American Hospital Association that is certainly worthy of its best mettle.

Hospitals Compared to Hotels

In recent years there are those who have been prone to compare hospital service and costs with hotel service and its cost. The journalist has taken up this hospital-hotel comparison from quite a different angle, the burden of his story being anything but complimentary to the hospital. Although he has neglected fundamentals in his zeal for journalistic effect and has used the unfair method of citing the isolated case, his criticisms must be taken to heart insofar as they pertain to the personal attitudes and attributes, courtesy, kindliness and consideration, revealed to the uninitiated by those who through daily contact are accustomed to many unhappy sights and sounds.

A fundamental error of the commentator is his failure to recognize the important element of responsibility. A person goes to a hotel as a free and independent agent voluntarily seeking lodging and such other services as the hotel affords, agreeing to pay cost and expecting to pay a profit, and retaining full personal discretion in all his actions. The patient who knows or who believes he knows more about his illness than the physician he consults might conceivably wish to maintain the same status in a hospital. All others, however, come to a hospital by way of admitting that they are not able to care for their own illness. They come seeking the help of the doctor, the nurse, the technical staff, thereby placing personal health responsibility upon that doctor and that hospital.

Responsibility Toward Each Patient

Fulfillment of this responsibility requires that we who are concerned with the operation of hospitals must look out for the welfare of each patient, and each patient means all patients. Consideration of all patients necessitates the ordering of things toward the greatest good for the greatest number. Certain rules become necessary, lines of responsibility must be drawn and procedures followed, the reason for which may not always be clear to the individual patient. The exceptions requested are often against the best interests of the patient concerned and would be resented by him if they were permitted the patient in the next room or the next bed. This element of responsibility must not be used as a cloak for unnecessarily high-handed and arbitrary action, to be sure, but a full realization of its existence by the patient, or more often, by the friends or the family of the patient would remove the foundation from a great deal of hasty criticism.

Critics of the hospital frequently complain in one breath of the cost of hospital care and in the next breath they demand refinements of service that would triple the cost. The entire situation becomes relative: Can I get what I need most at

*Read at the meeting of the Michigan Hospital Association, Battle Creek, April 26, 1929.

the hospital or at home? Shall I ask the hospital to give me what I need at a price within my means, or shall I demand what I want in addition to what I need, regardless of cost? Our aim should be to provide for the need of each and every patient, whatever that need may be, and to add as much in the way of increased comfort and happiness as financial and other limitations will permit us to do.

Hospital Now a Community Unit

The tremendous advance from empirical to scientific medicine, with the accompanying advance in laboratory sciences, in medical and surgical specialization and in educational standards, has converted the hospital from a nursing home into a complex community service unit that more and more centers upon itself essential and fundamental community welfare effort, until it might well be considered the battle ground of humanity in times of peace, the battle ground upon which are fought many of the major issues of fundamental human advancement. Here the precision of the scientific method constantly stimulates the imagination toward the application of advancing ideals. We have learned that currently ideals may be very expensive, however economical they may be fundamentally in the progress of the race.

The economics of hospital operation are therefore under intensive study, fortunately by a competent subcommittee of the Committee on the Cost of Medical Care. When this study is completed it will give us a great deal of help, first in orienting our own economic policies to our public, and second in proving to our public the soundness of hospital costs. Much has already been done in this direction by John A. McNamara's article on hospital costs, which appeared in THE MODERN HOSPITAL for June, 1928, and which was quoted freely in the *Labor Review* for August, 1928. Anyone who has not read Dr. Michael M. Davis' series of articles in the *Survey* dealing with the cost of illness should certainly do so at once. Louis I. Dublin, writing on "What Price Doctors?" in *Harper's* for November, 1928, points out many hopeful developments. There is so much of value in these articles that they should be read in their entirety and not spoiled by an attempt at summarization. In view of all the splendid work that is under way in answer to our critics' chief complaint, hospital costs, there is little to say on the subject that has not already been said by competent observers.

First, Mr. McNamara has shown clearly that rates are not out of proportion to costs, that costs have advanced less than the average advances in commodity costs since 1913 and that hospitals in this country are not mismanaged from the operating standpoint.

Second, Doctor Davis has shown that the American public can afford to pay more for health than it is now paying.

Third, Mr. Dublin has pointed to the leveling processes now going on with the increase in free, part-pay and full-pay clinics and industrial medicine developments. With Doctor Davis, he urges further application of the insurance principle in distributing the risk of uncertainty that has always militated against building reserves in family financing to meet health expense. This is particularly necessary at the present time in the face of universal high pressure installment selling that aims to leave no cash reserve in any individual pocket, no matter what the individual income may be.

It is time that we all gave serious thought to a critical analysis of the economic fundamentals of our hospital work, the structure of which, in spite of markedly changed demands, we have changed but little with the exception of some increase in rates. Frankly, we do not know our capital investments and capital costs, we have developed no rational and universally applicable principles of cost accounting and rate making and we have almost no unit of direct financial comparison, one hospital with another, because of different methods of arriving at comparative units such as cost per day, cost per visit, room cost and ward cost.

Too Much Free Service Given

When we have finished such an analysis we shall discover these three things: (1) We are giving too much service totally free, (2) we are charging the ward patient too little and (3) we are charging the moderate priced private room patient and the semiprivate patient too much.

We all know that the plight of the so-called middle class patient is to a high degree self-imposed. When illness was largely confined to home care, this patient ordered his expenditures more nearly in accordance with his means and did not have the same opportunity to observe more elaborate service that he has in the hospital. He does not now want "middle class" service. He wants the most expensive type, at a reduced rate, and unhappily his doctor too often gives encouragement to or initiates these demands. We do not object to his purchase "from earnings" of his automobile, his electric refrigerator, his oil-burning furnace and his radio if he has a savings account ample to provide against illness, which is bound to strike the average individual once in three years and some member of the average family of four every year.

We still need to emphasize, also, the fact that no charitable institution can give away anything that has not first been given to it. We are only the medium for good works. Our bills must be paid and our employees must live. We can give, therefore, only in such measure as we receive. Every human being who is ill seems to expect some gratuitous service. When illness was cared for in the home, the sick demanded this gratuity in the way of personal sacrifice from members of the family. Now that so large an amount of care in illness has been transferred to hospitals that same human instinct demands something for nothing of the institution, and we all know how fully many of our loyal workers have given of their own life energies and emotions to fill that demand.

The public must be made to understand that careful record of identification data is for their protection, not for our convenience only. The loudest critic of admission routine would be and is the loudest voiced in complaining of failure to receive a message. The public must be made to realize that we deal with at least five human elements for every patient we serve—the patient, two employees and at least two relatives.

Errors occur of course. Tactless remarks have been and will be made. There will be occasions when hospital workers forget that a distorted and bandaged human countenance brings horror to the souls of the storekeeper and the banker, but hospital executives know that kindly, courteous, thoughtful and self-sacrificing service to suffering humanity is the rule in our hospitals and not the exception. We have chosen our work and are not complaining because it makes great demands upon us. We are not asking laudation for our voluntary acts, but truth is truth, and this the public should be told.

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Capital Investment in Hospitals and Clinics

The Committee on the Cost of Medical Care is undertaking as one of its investigations the study of capital investment in hospitals and clinics.

From commercial sources it is estimated roughly that about $250,000,000 a year now goes into the building of new hospitals and clinics or into the reconstruction of old ones. We do not know the amount of capital accurately; the number of beds or other facilities furnished in different communities by a given investment; the sources, public, philanthropic, medical or business from which the capital is derived, nor the policies which are adopted with reference to its replacement or allowance for depreciation.

These matters are of immense importance to the financing and management of hospitals and of medical services. They are of interest also to those concerned with medical education and to community chests, tax appropriating bodies, foundations and individuals who receive appeals for the financial support of hospitals.

Relation of Expenditures Involved

The relation of the capital expenditure of hospitals to their current expenditure is also involved in this study. Owing to the increasing income which hospitals can now derive from paying patients, the amount of charitable gifts needed for the current expenditures of hospitals has, for many institutions, become relatively small with reference to their demands for capital funds. A detailed study of current expenses is not intended in this study.

The method proposed for the study is to secure such material as is available from published sources or from certain national organizations, but to depend primarily upon visits to selected communities. These would be chosen partly because of their type and size, partly through geographical considerations. The hospitals in these communities would be visited to secure the needed facts.

Following the collection of the material from the field would come a period of analysis of the facts gathered, and consideration of the opinions and impressions which would also be secured during the field interviews.

A study would then be made, in a small number of selected institutions, of the accounting policies and methods. The general field study would give, it is hoped, a picture of actually existing practices with regard to capital investment and capital financing and its relation to current financing of hospitals, while the accounting study should furnish some reliable data as to desired standards and methods. Certain important cost problems would come in for study here, although it is unlikely that all of the cost units needed by the administrator could be included in the study.

Professor Rorem to Conduct Study

Professor C. Rufus Rorem, assistant dean, school of business administration, University of Chicago, will conduct this study under the direction of Dr. Michael M. Davis, member of the executive committee, Committee on the Cost of Medical Care.

A committee, of which Dr. Winford H. Smith is chairman, has been appointed by the American Hospital Association to cooperate with the Committee on the Cost of Medical Care, and bespeaks the cooperation of hospitals in this investigation.

Where Do People Die—at Home or in Hospitals?

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A RECENT survey of the more prevalent forms of sickness in certain rural districts of New York State with a combined population of more than 100,000 persons indicates an average incidence of one case of illness per person per year.[1] If the list of causes were extended to include all types of illness, the average would, of course, be higher. This does not mean that every person in this population group was sick at least once in the course of the year. Some were sick more than once while others passed through the year in unbroken good health.

Importance of Morbidity Stressed

Were we to permit ourselves to project this limited experience over the country as a whole, we could speak of an annual total of more than 125,000,000 cases of illness, with a quarter of a billion as not an impossible estimate. The mortality in the entire country in 1927, based on the number recorded in the registration area, was approximately 1,360,000. Thus, we would get an average of from 100 to 200 cases of sickness for each death. While these figures do not have the validity of estimates usually made in statistical work, the impression they carry of the far greater importance of morbidity in comparison with mortality, from the point of view of society as a whole, is altogether correct.

The growing recognition of this fact by organized public opinion manifests itself in diverse ways, among which the development and increase of hospital facilities are outstanding. According to the latest figures[2], in the course of the twenty-year period from 1909 to 1928, the number of beds in hospitals of various types in this country more than doubled—from 421,065 to 892,934—while in the same interval the population increased by 30 per cent. The extent to which hospital facilities meet the needs of the people is, therefore, one of the essential factors in a consideration of the sickness situation as a whole.

Unfortunately, the necessary information for sufficiently large areas is not readily available and its compilation on the basis of the experience of individual hospitals and other institutions is a task of forbidding magnitude. The New York State Department of Health, therefore, approached this analysis from the less satisfactory but more practicable angle of recorded mortality. The department is the custodian of certificates of death for the state outside of New York City, a territory with a population of 5,500,000. Since certificates of death show, among other things, the place where death occurred, whether in a private dwelling or in an institution, with the name of the institution, the department was able to make a comparative analysis of mortality in private dwellings and in the more important classes of institutions[3], by cause of death, color, sex, age, general nativity. This was done with the records for one year, 1926.

The department is now making its findings public with the hope that the information may be of some value to workers in the field of public health and particularly to those concerned with the broad aspects of the hospital problem.

The distribution of mortality in the state, exclusive of New York City, in 1926, according to place where death occurred is shown here.

	Deaths	*Per Cent*
Private dwellings	52,885	70.3
Institutions	22,383	29.7
Total	75,268	100.0

Out of 1,000 institutional deaths, 642 were recorded in general, special and surgical hospitals, 149 in state institutions for insane, 76 in county and city homes and almshouses and 59 in tuberculosis hospitals and sanatoriums. A tabulation of the deaths in state and private institutions in New York State, exclusive of New York City, is shown in Table I.

Table II shows the mortality in private dwellings and in institutions and the more important causes of death. The six leading causes of death

[1] DePorte, J. V., Sickness in Rural New York, the Journal of the American Medical Association, Feb. 16, 1929, Vol. 92, pp. 522-528.

[2] Hospital Service in the United States, the Journal of the American Medical Association, Mar. 30, 1929, Vol. 92, p. 1054.

[3] The term "institution" relates to any place that is not a private dwelling. In the preparation of the list of institutions all available local, state and national sources were employed.

in private dwellings were: diseases of the heart, 24.9 per cent of all deaths; cerebral hemorrhage and apoplexy, 10.2 per cent; acute and chronic nephritis, 9.7; cancer, 9.2; pneumonia, 8.0; accidents, 5.1. In institutions, the six leading causes, in order, were: diseases of the heart, 14.0 per cent; tuberculosis, 9.4; accidents, 8.9; pneumonia, 8.6; cancer, 7.7; acute and chronic nephritis, 6.8. Deaths from tuberculosis in institutions represented 9.4 per cent of all deaths, which was double the corresponding proportion in private dwellings. Diseases of the digestive system were responsible for 10 per cent of all deaths in institutions and only 4.3 per cent of the deaths in private dwellings.

Causes of Institutional Deaths

Deaths in institutions were more numerous than in private dwellings from the following causes, the figures representing deaths in institutions per 100 total deaths from each cause: appendicitis and typhlitis, 90.2; general paralysis of the insane, 83.3; tetanus, 82.5; biliary calculi, 72.6; puerperal diseases, 71.4—the largest percentage in this group was recorded from puerperal septicemia, 81.2; diseases of the bones and of the organs of locomotion, 66.7; hernia, intestinal obstruction, 66.7; all other nonvenereal diseases of the genito-urinary system and adnexa, 62.3—the more important of these were salpingitis and pelvic abscess, 88.9, benign tumors of the uterus, 71.3 and diseases of the prostate, 52.1; syphilis, 59.9; epilepsy, 59.1; ulcer of the stomach and duodenum, 59.8; injury at birth, 54.5.

Circulatory Diseases Show Low Death Rate

Considering classes of important causes, the percentage of deaths recorded in institutions was greatest in mortality from puerperal diseases, 71.4, followed by diseases of the digestive system, 49.4. Least in mortality were diseases of the circulatory system, 20.8.

The proportion of deaths occurring in institutions had a low point in infancy and early childhood, rising to a maximum in the age group, thirty to thirty-four years, and declining to an absolute minimum in the oldest age group, eighty-five years and over. Deaths in institutions were more numerous than in private dwellings in the single group, thirty to thirty-four years. In the preceding group, twenty-five to twenty-nine years, deaths in institutions and private dwellings were practically equal.

On examining the classes of institutions that are of most importance numerically, it is found

TABLE V—Deaths in Private Dwellings and Institutions, by Sex, Color

Place of Death	*Deaths*						
	Total	*Male*	*Female*	*White*	*Colored*	*Native-born*	*Foreign-born*
New York State, exclusive of New York City	75,268	39,219	36,049	73,713	1,555	57,072	17,587
Private dwellings	52,885	26,581	26,304	52,090	795	40,791	11,759
State and private institutions	22,383	12,638	9,745	21,623	760	16,281	5,828
General, special and surgical hospitals—not for tuberculosis	14,360	8,057	6,303	13,916	444	10,852	3,347
Institutions for the feeble-minded and the insane	3,337	1,731	1,606	3,221	116	2,176	1,113
County and city homes and almshouses	1,698	1,238	460	1,646	52	1,167	487
Tuberculosis hospitals and sanatoriums	1,323	853	470	1,217	106	939	380
Fraternal, church and charitable organization homes	391	175	216	391	..	221	167
Homes for the aged	296	77	219	290	6	185	105
State and private curative institutions—not for the tuberculous or the insane	246	121	125	243	3	167	78
Maternity hospitals and infant homes	199	98	101	196	3	190	9
Our Lady of Victory Infant Home and Hospital	189	118	71	179	10	133	55
State homes for soldiers, sailors and their widows	106	63	43	106	..	82	24
Orphan asylums and homes for friendless women, children, etc.	61	20	41	61	..	56	4
Jails, penitentaries, prisons	54	54	..	40	14	34	18
Schools and colleges	54	10	44	54	..	30	24
Hospitals for incurables	38	12	26	38	..	24	13
Industrial homes, training schools and reformatories	31	11	20	25	6	25	4

* Less than one-tenth of 1 per cent.

that 52 per cent of deaths in the group of general hospitals were of persons over forty-five years of age, 45 per cent over fifty years of age, 30 per cent over sixty years and 15 per cent over seventy years.

In tuberculosis hospitals and sanatoriums, 26 per cent of all deaths were of persons over forty-five years of age, 18 per cent were over fifty years and 7 per cent over sixty years. In other words, three-quarters of all deaths were of persons under forty-five years of age. Another grouping of the ages shows that half the deaths recorded in these institutions occurred between the ages of twenty-five and forty-four years, 13 per cent in the preceding group, twenty to twenty-four years, while 11 per cent of the deaths were of persons who were under twenty years of age.

Death Rate of Insane Shown

Approximately half the deaths, 49 per cent, recorded in institutions for the feeble-minded and the insane were of persons over sixty years of age and 28 per cent, of persons over seventy years of age.

In the next class of institutions, county and city homes and almshouses, 53 per cent of the deaths were of persons over seventy years of age, more than three-quarters of the total mortality, 76 per cent, being of persons over sixty years of age.

Expressing the mortality in private dwellings and certain types of institutions in terms of the total mortality in certain age groups, we find that out of 1,000 deaths under one year of age, 699 were recorded in private dwellings and 258 in general, special and surgical hospitals, the rest being scattered among the other classes of institutions. In the group, one to nineteen years, 637 out of 1,000 deaths were recorded in private dwellings, 294 in general, special and surgical hospitals, 26 in tuberculosis hospitals and 23 in institutions for the feeble-minded and the insane. In the group, twenty to forty-four years, 512 out of 1,000 deaths were recorded in private dwellings, 316 in general hospitals, 76 in tuberculosis hospitals and 71 in institutions for the feeble-minded and the insane. In the group, forty-five years and over, 750 out of 1,000 deaths occurred in private dwellings, 144 in general hospitals, 47 in institutions for the feeble-minded and the insane and 30 in county and city homes and almshouses.

There has also been computed for certain important causes, the proportionate distribution of deaths in institutions and private dwellings by age. The results are shown pictorially in the accompanying diagram which appears on page 78.

AND GENERAL NATIVITY IN NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY, 1926

Per Cent							
Total	*Male*	*Female*	*White*	*Colored*	*Native-born*	*Foreign-born*	*Place of Death*
100.0	100.0	100.0	100.0	100.0	100.0	100.0	New York State, exclusive of New York City
70.3	67.8	73.0	70.7	51.1	71.5	66.9	Private dwellings
29.7	32.2	27.0	29.3	48.9	28.5	33.1	State and private institutions
19.1	20.5	17.5	18.9	28.6	19.0	19.0	General, special and surgical hospitals—not for tuberculosis
4.4	4.4	4.5	4.4	7.5	3.8	6.3	Institutions for the feeble-minded and the insane
2.3	3.2	1.3	2.2	3.3	2.0	2.8	County and city homes and almshouses
1.8	2.2	1.3	1.7	6.8	1.6	2.2	Tuberculosis hospitals and sanatoriums
.5	.4	.6	.5	..	.4	.9	Fraternal, church and charitable organization homes
.4	.2	.6	.4	.4	.3	.6	Homes for the aged
.3	.3	.3	.3	.2	.3	.4	State and private curative institutions—not for the tuberculous or the insane
.3	.2	.3	.3	.2	.3	*	Maternity hospitals and infant homes
.3	.3	.2	.2	.6	.2	.3	Our Lady of Victory Infant Home and Hospital
.1	.2	.1	.1	..	.1	.1	States homes for soldiers, sailors and their widows
*	*	.1	*	..	*	*	Orphan asylums and homes for friendless women, children, etc.
*	.1	..	*	.9	*	.1	Jails, penitentaries, prisons
*	*	.1	*	..	*	.1	Schools and colleges
*	*	*	*	..	*	*	Hospitals for incurables
*	*	*	*	.4	*	*	Industrial homes, training schools and reformatories

TABLE II—DEATHS IN PRIVATE DWELLINGS AND INSTITUTIONS BY CAUSE, IN NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY, 1926

Int. List Numbers	*Cause of Death*	*Private Dwellings*	*Institutions*
1–205	All causes	52,885	22,383
1–42	I. Epidemic, endemic and infectious diseases	5,174	3,100
1(a)	Typhoid fever	92	88
7	Measles	210	39
8	Scarlet fever	91	20
9	Whooping cough	351	38
10	Diphtheria	151	99
11	Influenza	1,328	284
21	Erysipelas	114	49
22	Acute poliomyelitis	86	21
23	Lethargic encephalitis	47	34
29	Tetanus	7	33
31–37	Tuberculosis, all forms	2,473	2,104
38	Syphilis	139	208
	All other causes in class I	85	83
43–69	II. General diseases not included in class I.	6,932	2,605
43–49	Cancer and other malignant tumors, all forms	4,857	1,723
44, 45	Of the stomach, liver, peritoneum, intestines and rectum	2,462	816
46	femal genital organs	664	236
47	breast	585	114
43, 48, 49	other organs not specified	1,146	557
51	Acute rheumatic fever	107	26
57	Diabetes mellitus	880	404
58	Anemia, chlorosis	412	98
60(a)	Exophthalmic goiter	97	78
65	Leukemia and Hodgkin's disease	138	39
66	Alcoholism, acute or chronic	170	70
	All other causes in class II	271	167
70–86	III. Diseases of the nervous system and of the organs of special sense	6,568	2,089
74	Cerebral hemorrhage, apoplexy	5,399	1,139
76	General paralysis of the insane	76	378
78	Epilepsy	88	127
84	Other diseases of the nervous system	225	65
	All other causes in class III	780	380
87–96	IV. Diseases of the circulatory system	14,961	3,927
87–90	Diseases of the heart	13,192	3,143
91	Diseases of the arteries	1,557	695
	All other causes in class IV	212	89
97–107	V. Diseases of the respiratory system	5,044	2,176
99	Bronchitis	495	59
100	Bronchopneumonia, including capillary bronchitis	1,869	779
101(a)	Lobar pneumonia	2,259	1,133
	All other causes in class V.	421	205
108–127	VI. Diseases of the digestive system	2,294	2,237
111	Ulcer of the stomach and duodenum	162	241
113	Diarrhea and enteritis—under 2 years of age	778	221
117	Appendicitis and typhlitis	70	647
118	Hernia, intestinal obstruction	214	428
122	Cirrhosis of the liver	324	101
123	Biliary calculi	51	135
	All other causes in class VI	695	464
128–142	VII. Nonvenereal diseases of the genito-urinary system and adnexa	5,412	1,948
128	Acute nephritis, including unspecified under 10 years of age	227	89
129	Chronic nephritis, including unspecified 10 years and over	4,928	1,436
	All other causes in class VII	257	423
143–150	VIII. The puerperal state	171	427
143	Accidents of pregnancy	20	45
144	Puerperal hemorrhage	25	42
145	Other accidents of labor	21	45
146	Puerperal septicemia	38	164
148	Puerperal albuminuria and convulsions	43	102
	All other causes in class VIII	24	29
151–154	IX. Diseases of the skin and of the cellular tissue	109	80
155–158	X. Diseases of the bones and of the organs of locomotion	22	44
159	XI. Malformations	553	243
160–163	XII. Early infancy	1,895	1,254
161(a)	Premature birth	1,178	714
161(b)	Injury at birth	327	392
	All other causes in class XII	390	148
164	XIII. Old age	311	60
165–203	XIV. External causes	3,392	2,186
165–174	Suicide—total	592	139
175–196	Accidental or undefined—total	2,684	1,985
201–203			
197–200	Homicide—total	116	62
204–205	XV. Ill-defined diseases	47	7

TABLE III—DEATHS IN PRIVATE DWELLINGS AND INSTITUTIONS BY AGE IN NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY, 1926

Age	Deaths			Per Cent	
	Total	Private Dwellings	Institutions	Private Dwellings	Institutions
All ages	75,268	52,885	22,383	70.3	29.7
Under 1 year	7,229	5,052	2,177	69.9	30.1
1- 4 years	2,277	1,631	646	71.6	28.4
5- 9 years	1,005	598	407	59.5	40.5
10-14 years	786	438	348	55.7	44.3
15-19 years	1,254	724	530	57.7	42.3
20-24 years	1,668	877	791	52.6	47.4
25-29 years	1,781	890	891	50.0	50.0
30-34 years	2,024	945	1,079	46.7	53.3
35-39 years	2,594	1,308	1,286	50.4	49.6
40-44 years	2,917	1,601	1,316	54.9	45.1
45-49 years	3,536	2,135	1,401	60.4	39.6
50-54 years	4,384	2,783	1,601	63.5	36.5
55-59 years	5,147	3,560	1,587	69.2	30.8
60-64 years	6.217	4,536	1,681	73.0	27.0
65-69 years	7,555	5,687	1,868	75.3	24.7
70-74 years	7,644	5,983	1,661	78.3	21.7
75-79 years	7,279	5,751	1,528	79.0	21.0
80-84 years	5,524	4,613	911	83.5	16.5
85 years and over	4,395	3,735	660	85.0	15.0
Age not stated	52	38	14	73.1	26.9

In interpreting the graphs in the diagram it must be remembered that they represent percentages, not actual numbers. A high point, therefore, may in reality correspond to one or two deaths only. For example, in the mortality from "other puerperal causes," the high point in the age group, ten to fourteen years, represents only one death; the high point in the graph for diphtheria in the age group, thirty to thirty-four years, represents two deaths. The purpose of the graphs is to indicate the age groups in which the mortality recorded in institutions is relatively higher or lower than that in private dwellings.

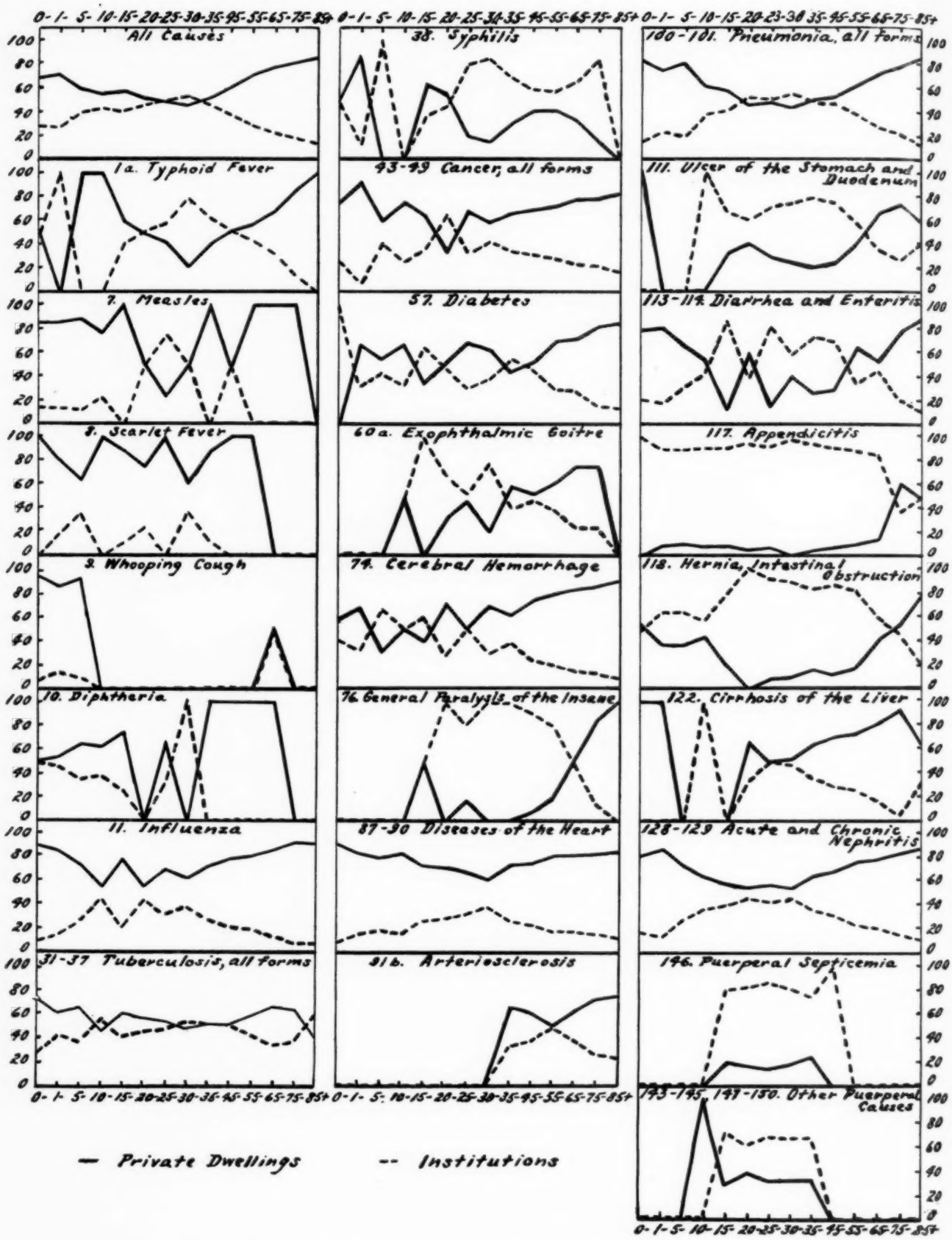
Deaths at practically all ages were more numerous in institutions than in private dwellings from puerperal causes, appendicitis, hernia, ulcer of the stomach, syphilis and paralysis in the insane.

Deaths at all ages were more numerous in private dwellings than in institutions from scarlet fever, whooping cough, influenza, diseases of the heart, arteriosclerosis and acute and chronic nephritis. In most of the age groups in the other causes shown in the diagram the deaths recorded in private dwellings outnumbered those in institutions.

Table IV shows a tabulation of the deaths of infants, with the first year of life subdivided according to the place where death occurred. Of the 7,229 deaths of infants under one year of age, 5,052, or 69.9 per cent, occurred in private dwellings and 2,177, or 30.1 per cent, in institu-

TABLE IV—DEATHS OF INFANTS UNDER ONE YEAR OF AGE IN PRIVATE DWELLINGS AND INSTITUTIONS IN NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY, 1926

Place of Death	Deaths					Per Cent				
	Total Under 1 Year	Under 1 Day	1-6 Days	1 Week 1 Month	1 Month 1 Year	Total Under 1 Year	Under 1 Day	1-6 Days	1 Week 1 Month	1 Month 1 Year
New York State, exclusive of New York City	7,229	1,898	1,255	942	3,134	100.0	100.0	100.0	100.0	100.0
Private dwellings	5,052	1,070	726	718	2,538	69.9	56.4	57.8	76.2	81.0
State and private institutions	2,177	828	529	224	596	30.1	43.6	42.2	23.8	19.0
General, special and surgical hospitals and sanitariums — not for tuberculosis	1,867	732	458	195	482	25.8	38.6	36.5	20.7	15.4
Maternity hospitals and infant homes	162	71	47	17	27	2.2	3.7	3.7	1.8	.9
Our Lady of Victory Infant Home and Hospital	54	7	12	2	33	.7	.4	1.0	.2	1.1
Other institutions	94	18	12	10	54	1.3	.9	1.0	1.1	1.7



Percentage of Deaths From Specified Causes in Private Dwellings by Age, in New York State, Exclusive of New York City, 1926.

tions, almost all of which were in the class of general hospitals. Deaths in maternity hospitals and infant homes numbered 162, or 2.2 per cent of all infant deaths.

Slightly over two-fifths, 43 per cent, of the deaths of infants under one week occurred in institutions, the corresponding percentage in the age group, one week to one month, being 24; the group, one month to one year, had a percentage of only 19. When the infant deaths in the several age groups are related to the totals in private dwellings and institutions separately, it is found that in institutions 73 per cent of the deaths were of infants under one month, the proportion in private dwellings being 50 per cent. The relatively larger number of deaths of young infants in institutions is clearly due to the fact that in the majority of instances maternity cases are discharged when the infant is about two weeks old. Institutions, therefore, have only a small number of infants in the older age groups and as a result the actual number of deaths in these groups is also small. Since figures on the infant population in private dwellings and institutions are not available, a true comparison of their infant mortality cannot be made.

The tabulation of deaths according to sex, color and general nativity is shown in Table V.

Deaths among males numbered 39,219, those among females numbered 36,049, an excess of mortality among males of 3,170. Deaths in private dwellings were almost equally divided between the two sexes, the excess of male mortality being recorded almost wholly in institutions. In general, special and surgical hospitals the deaths were proportioned as follows: males, 56.1 per cent, females, 43.9 per cent; in county and city homes and almshouses, males, 72.9 per cent, females, 27.1 per cent; in tuberculosis hospitals and sanatoriums, males, 64.5 per cent, females, 35.5 per cent. It is interesting to note that the 54 deaths recorded in jails, penitentiaries and prisons were all of males. Of all male deaths, 32.2 per cent occurred in institutions while the corresponding proportion among females was 27.0 per cent.

The total number of deaths included 73,713 white persons and 1,555 colored persons—1,441 Negroes, 92 Indians and 22 Chinese, Japanese and others.

Out of 1,000 deaths of white persons, 293 occurred in institutions, the corresponding figure for colored being 489. The disparity between the relative numbers of institutional deaths among white persons and colored persons was particularly marked in the group of tuberculosis hospitals and

TABLE I—DEATHS IN STATE AND PRIVATE INSTITUTIONS IN NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY, 1926

Type of Institution	*Number*	*Per Cent*
All Institutions	22,383	100.0
General, special and surgical hospitals and sanitariums—not for tuberculosis	14,360	64.2
Local and county	14,309	63.9
Federal	51	0.2
Institutions for the feeble-minded and the insane	3,337	14.9
State institutions for the insane	2,770	12.4
State institutions for mental defectives	304	1.4
Institutions for the feeble-minded and the insane (not state)	199	0.9
State institutions for the criminally insane	64	0.3
County and city homes and almshouses	1,698	7.6
Tuberculosis hospitals and sanatoriums	1,323	5.9
County	699	3.1
Local	423	1.9
Federal	143	0.6
Private	51	0.2
State	7	*
Fraternal, church and charitable organization homes	391	1.7
Homes for the aged—unqualified or apparently independent of an organization	296	1.3
State and private curative institutions—not for the tuberculous or the insane	246	1.1
Maternity hospitals and infant homes	199	0.9
Our Lady of Victory Home and Hospital (Lackawanna)†	189	0.8
State homes for soldiers, sailors and their widows	106	0.5
Orphan asylums and homes for friendless women, children, etc.	61	0.3
Jails, penitentiaries, prisons	54	0.2
State prisons	36	0.2
State and county jails and penitentiaries	18	*
State and private schools, convents and colleges	54	0.2
Hospitals for incurables	38	0.2
Industrial homes, training schools and reformatories	31	0.1
Industrial homes and reformatories other than state	21	*
State training schools and reformatories	10	*

*Less than one-tenth of 1 per cent.
†This large institution, comprising an orphan asylum, infant home, general hospital and a maternity hospital, could not be put into any one particular class and, therefore, is shown separately.

sanatoriums, 68 out of 1,000 deaths of colored persons being recorded in that group as compared with 17 deaths among white persons. In the other important classes of institutions the relative numbers for colored and white persons, in order, were: general hospitals, 286 and 189; institutions for the feeble-minded and the insane, 75 and 44; county and city homes and almshouses, 33 and 22.

No deaths of colored persons were reported in the following five groups of institutions: fraternal, church and charitable organization homes; state homes for soldiers, sailors and their widows; orphan asylums and homes for friendless women, children and girls; schools and colleges; hospitals for incurables.

An analysis of the mortality in the state according to the general nativity of the decedent shows that the proportion of foreign-born persons who died in institutions, 33.1 per cent, was higher than the corresponding proportion of native-born, 28.5 per cent. In general hospitals the percentages for these two groups of the population were identical, 19.0 per cent. The proportion of foreign-born was higher in institutions for the feeble-minded and the insane, it being 6.3 per cent as against 3.8 per cent native-born; in county and city homes, foreign-born, 2.8 per cent and native-born, 2.0 per cent; in tuberculosis hospitals and sanatoriums, foreign-born, 2.2 per cent and native born, 1.6 per cent.

Expressing the mortality of native and foreign-born in terms of the total mortality, we find that the proportion of foreign-born was least in maternity hospitals and infant homes, 4.5 per cent, while the deaths of native-born persons represented 95.5 per cent of the total. In fraternal and church homes the proportion of deaths of foreign-born was 42.7 per cent, the deaths of native persons representing 56.5 per cent.

The absence of essential data does not permit us to relate these figures to the several classes of the general population. We shall merely suggest that the unlike age composition of the foreign-born and the colored groups of our population on the one hand and the native-born white on the other may account for some, if not all of the differences shown above.

Concerning Physician's Right to Practice in a City Hospital

Doctor Henderson, physician and surgeon of Knoxville, Tenn., will be permitted to continue to take patients to the Knoxville General Hospital for treatment following the decision of the supreme court of Tennessee to which Doctor Henderson had appealed, according to a review of the case that appeared in the *Journal of the American Medical Association.*

Doctor Henderson, it was alleged, had been guilty of unethical and unprofessional conduct as a member of the staff of the hospital, which is owned and operated by the city under the management and control of the director of public welfare. It was currently reported that he had been soliciting practice from physicians and in some instances, as an inducement to such physicians to refer their cases to him, had offered to divide fees with them. Seventeen members of the attending staff of the hospital preferred charges against Doctor Henderson. The director of public welfare approved the action and notified Doctor Henderson that he would not be permitted further practice in the hospital except to care for patients already there. Doctor Henderson then filed a bill in equity to restrain the city of Knoxville and the director of public welfare from interfering with him in the practice of his profession in the hospital. The chancery court of the county decided in favor of the hospital.

The case was then appealed. Doctor Henderson testified, without contradiction, that he never solicited patients directly and that he never divided fees with a physician who brought a patient to him without the consent of the patient. There is no statute in Tennessee that would debar a physician from practice in the public hospitals of the state on the basis of charges preferred against Doctor Henderson, the court said. He can continue to practice in the public hospitals as long as he conforms to all reasonable rules and regulations of the institutions, but neither the city nor the hospital authorities can prescribe rules that contravene or conflict with state laws. The principles, however, are different with respect to private hospitals. According to the court, if physicians feel that the good of the medical profession demands regulations more stringent than those now in force, their remedy lies in the legislature, not in the courts.

Modern Babies Prefer Sanitation to Sentiment

"Take me back to the tumble-down shack where I was born," is becoming more and more a figment of the song writer's imagination as modern babies appear to scorn the tumble-down shack, or in fact any kind of a home to be born in, preferring rather the quiet and peace and dignity of the hospital.

In the hospitals of this country, more than 736,000 babies first saw the light of day last year which means that every twenty-four hours presented 2,000 new babies to the world, according to a study made by the American Medical Association.

A hospital news bulletin, commenting on this fact, says:

"Even the smallest hospital with its sterile conditions, its special equipment and trained personnel is a safer place for a baby to be born than is the wealthiest home where the same control of sterilization and other conveniences are difficult to obtain. The hospital baby gets a splendid start in life, because he is born in an institution organized especially to service him and his mother. Stringent regulations concerning cleanliness, sanitation, quiet and a rigid schedule of feedings are to be found in every reputable hospital, and that is why every year sees an increasing number of babies born in hospitals and increasing demands for greater facilities for hospital maternity service."

Practical Methods of Financing the Small Hospital*

By CLARENCE H. BAUM
Superintendent, Lake View Hospital, Danville, Ill.

MUCH publicity has been given to hospital costs during the last few years. The cost to patients of the middle class has been especially stressed. Magazines and newspapers have assumed that hospital charges are exorbitant and their articles have severely criticized the hospitals. The hospitals naturally have resented this criticism and in many cases have taken a defensive attitude. This is wrong. It is time that hospital administrators presented the true facts to the public, telling why the costs are what they are and showing that the average citizen gets more for every dollar spent in the hospital than for any other dollar that he spends. Hospital administrators know they have nothing for which to apologize but they do not seem to be able to get this fact before the public.

The average citizen is intelligent and if he can be shown that the institutions are being run economically he will be satisfied. The average citizen would rather spend his money for anything but hospital care, but if he can be shown that he gets full value for every dollar spent in the hospital he will be content. He does not want to be sick and he does not plan for sickness in his budget. Therefore, when sickness comes and he has to go to the hospital, he is in a critical attitude. He is paying for something he would rather not have if he could choose. He forgets that in the hospital he saves days of sickness compared to those spent in treating illness in the home; he forgets that scientific hospital treatment will not only save immediate time in days but that often they will add years to his life.

Running the Hospital Economically

Every hospital administrator should examine his plant carefully to see what he has to offer the public in the way of economical operation. It is doubtful if any workers keep longer and more irregular hours than do hospital attendants and their co-workers, the doctors. Hospital activities are even more varied than other lines of human endeavor, such as commercial plants and factories, yet the hospital uses fewer employees, comparatively speaking, than these industries. Industries can charge their operating expenses to the cost of the product. If the hospital used an operating force that compared in size with that of many commercial concerns, hospital costs would be much higher than they are. Compare the size of the office force in department stores with that of the hospital. This will give some idea of the work the personnel of the small hospital has to do—without any extra pay.

Criticism, an Attitude of Mind

Criticism of the hospital is largely an attitude of mind. The Kentucky Derby is not criticized because a horse runs a few minutes and receives $60,000. A prize fight, for which the seats cost $25, is not criticized. The middle class citizen buys a radio or an automobile and in many cases pays more for it than for his hospital care. But he pays it, and newspapers and magazines do not hasten to print articles on how to reduce the price of radios or of automobiles for the average man. The manufacturers make a profit. The hospitals do not.

The average citizen is intelligent enough to realize these facts when they are brought to his attention often enough for him to assimilate the facts and realize their truth. The story of the work of the hospital must be told again and again. If the hospital is to be financed, the public must be taken into the confidence of the hospital management.

Methods of financing the hospitals may be considered under four headings—plant, maintenance, growth and debt.

In planning their plant and equipment, hospital administrators must work with their department heads as well as with the architect. All services should be routed to save all the time and labor possible. Two services, such as the laundry and supply, may use narrow corridors at different hours of the day. Recently a new hospital was finished in which the architect did not consult the department workers, and a beautiful kitchen with monel metal service and quarry tile floors was

*Read at the thirty-first convention of the American Hospital Association, Atlantic City, N. J., June 17-21, 1929.

installed, but with all basement service using the kitchen as a passageway. Evidently the daily inconvenience caused by this was overlooked, and the person in charge of the kitchen is very unhappy.

At Lake View Hospital we have planned for central service in our kitchen. Because of this we are making our diet kitchens on the floors a source of revenue by converting them into rooms. Department heads have not only made suggestions that help to save money but each one takes a personal pride in his department. The small hospital can easily arrange central service by using food carts when it is not practical to install new serving dummies. This service is saving us money by preventing waste in supplies and foods. Much time can be saved if allied services are grouped together. The laboratory is more efficient in giving service and saving labor when it is adjacent to the operating room. The boiler room and the laundry yield big dividends in satisfaction when they are removed as far as possible from the patients' rooms.

Changes in operation and maintenance are constantly taking place. Although it is difficult to keep pace with the changes, the hospital must be ever on the watch for better methods. A small hospital surely can use one of the automatic coal stokers on the market to-day and save money in the cost of coal and labor. At Lake View we are using such a stoker to fire a 150 h. p. boiler, we are burning the cheapest coal screenings at $1.50 a ton and we are saving the expense of an extra fireman.

Saving Money on Transportation Charges

One hospital administrator saves an almost unbelievable amount every year by weighing all express packages at what he calls his receiving station, which is merely a platform scale by the back door. He states that the weight of most of the express packages and of much of the freight is only estimated and that by checking up on the rate, he often receives rebates from transportation charges that add an appreciable sum to the hospital's income.

At Lake View Hospital we sell all of our garbage instead of burning it, we sell our cinders to road builders and we bale our waste paper. This provides extra income that can be used for new equipment. If the garbage buyer finds silverware in the garbage, we give him five cents for each piece. This is less than cost for the silverware and helps us check on the dishwasher as well.

Time means so much to the superintendent that it is a most important thing for him to save. Among time savers are daily graphs that show at a glance the condition of the hospital. We like to use a graph of the daily census, which shows whether the hospital business is increasing or decreasing. Another interesting graph is a daily graph of expenses, receipts and earnings. The administrator knows at a glance whether the financial condition of his institution is good or if he is nearing the danger zone. When the line is straight up and down, the receipts, earnings and expenses are equal. If the expense line slips forward, it is an indication that trouble is coming.

A Good Bookkeeping System Is Necessary

It is a help to the superintendent to have the daily facts of the work on his desk. Any good bookkeeping system will give a daily picture of the work. A fifty-bed hospital can get an outfit to do this work and the record can be kept by pen for as small an amount as $60. The larger institutions may prefer to use a mechanical bookkeeping machine, which will give the same information at a cost of from $35 to $75 a month, according to the type of machine that is bought. The ability to watch day by day the accounts of patients and to keep the collections up to date will more than pay for the machine.

We are finding a flat rate charge for various types of work an advantage in increasing our finances. A year ago Lake View Hospital established for maternity care a flat rate of $35 for ten days in the wards and from $45 to $65 for ten days in a private room. Not only did we increase this work 33 1/3 per cent, but we also improved our collections. The patients were informed that the special rate must be paid when they left; otherwise they would have to pay the regular room rate of from $4.50 to $6.50 a day. Only in three or four cases was the special price not paid by patients before they left. Dr. Paul W. Wipperman, superintendent, Touro Infirmary, New Orleans, found in a recent study of room occupancy that he could keep two $6 rooms occupied 84 per cent of the time, while his $10 rooms were occupied only 33 per cent of the time. Since our experience at Lake View has been the same as his, this suggestion is offered as a means of increasing room revenue.

In round numbers, only 25 per cent of the hospital expenses is for general supplies, whereas 25 per cent is for food and 50 per cent is for salaries. The two main ways for the small hospital to save money are watching the food service and watching the pay roll. Hotels, it may be noted, do not feed many of their employees. On the other hand, many hospitals, paying the same salaries for similar services, feed all of

their employees. A big saving can be made if this item of expense is watched.

To grow, hospitals should study the needs of the community and try to meet these demands one hundred per cent. There is certainly a need for a good laboratory even in the small hospital. The laboratory not only provides important diagnostic aids, it is also a sure source of revenue. The cost of laboratory service can easily be determined and a price set that will cover the cost and operating expenses. Our hospital brought the laboratory to the attention of the staff members and of the doctors using the hospital by having weekly conferences in the laboratory under the supervision of the laboratory director. At this time interesting cases that had been treated during the week were demonstrated to the doctors by means of x-ray films, slides made from tissues and preserved specimens. The laboratory income can also be increased sometimes if the hospital will make an effort to do the laboratory work for the state and for the city. This not only increases the revenue but also advertises the hospital.

Another means by which the hospital can be enlarged is by interesting members of the county board in placing their tuberculous patients in a wing or building managed by their own local hospital. This is being done in a satisfactory manner in Decatur, Ill. The county has built on the hospital grounds a fifty-bed sanatorium which is connected with the hospital by a tunnel. The administration is from the hospital office. Not only does this give better service to the community by providing care for local patients as soon as they need it, thereby raising the general health of the community, but it also increases the volume of work in the hospital and enables it to offer better and cheaper service. The extra service will also warrant the employment of more proficient help.

Methods of Making the Hospital Known

The growth of the hospital depends on its use by the public. The more the public knows about the hospital the more it will use it, and the more ways the hospital can be advertised the better the public will know it. One of the best pieces of advertising that we have done at Lake View Hospital recently is through our "Green Tea Room." We decorated a small room in the corner of the basement and had our painter paint the tables a refreshing green and the cement floor in cream and green squares. We serve regular hospital meals in this tea room and also give short order service at all hours. For persons from a distance who bring their sick relatives to Lake View, the tea room is a convenience in that they are free to go at any time and get a light lunch without being required to leave the hospital. One extra maid is required part time to take care of this service but it more than pays for itself not only in dollars but in the good will of the public towards the hospital. The floors are also relieved of the burden of serving extra trays in the rooms. We serve from 200 to 300 meals a month in this little room which contains only six small tables.

In presenting the needs for new equipment and new departments to the public and also in advertising the hospital in a general way, we have found it an excellent plan to budget the publicity. If the hospital administrator will have some definite quota of interesting news for the papers at least once or twice a week he will be surprised to see the benefits it brings to the hospital. It is easy to forget advertising material unless some definite plan is made for it. In addition to articles for the papers we find that our bulletin issued once a month is looked for and read by our 2,500 subscribers. Printed reports and pamphlets placed in an attractive holder near the entrance, marked "Take One," also enable us to pass on desirable information.

Working Out the Hospital's Financial Problems

Although the hospital debt should be the worry of the board of trustees more than it is of the hospital administrator, still the administrator must work in cooperation with the board and keep it fully informed concerning the operation of the institution. There is generally a key man who is the person to get interested in every project. This person will be a wonderful support to the superintendent. He may be the president of the board or he may be a person who will head a small group that will, in time, pass the work to still larger groups. A banker or an influential business man often has an entrée to the public confidence that the hospital superintendent does not have. If the superintendent will interest some such person in the hospital, the financial problems can always be worked out satisfactorily.

There are only two ways of obtaining ready money for the hospital debt. One is by seeking a gift, the other is by using credit to borrow sufficient funds. Gifts are hard to get but if a plan is worked out for paying on a loan from a sinking fund, a loan can always be obtained. Some time ago we needed $20,000 for an emergency. The board members, several of the doctors and other friends interested in our problem signed bank notes for $500 each. These were endorsed to the hospital, and the hospital received the money and paid the interest and principal as the notes became due. All the signers did was

to lend us their credit. The loan cost them nothing since the hospital assumed all the obligations. There are several companies that will lend money to hospitals on bonds. These companies make all arrangements and even sell the bonds because they know that hospitals are among the best financial risks to be found anywhere. Some of these companies charge 5 per cent for doing this work. Therefore, $5,000 is charged for every $100,000 that is borrowed. If the hospital board will handle the bond issue, this 5 per cent can be saved.

Lake View Hospital has just recently floated a $300,000 bond issue without any cost to the hospital except the printing of the bonds. The members of our board were interested enough to donate their services to the hospital. A board member who is a lawyer prepared the bonds with the advice and assistance of bank members. A business man headed the selling committee. We expect to repay this loan by taking a small percentage of our earnings each year as a sinking fund which will be used to reduce this loan gradually.

Ladies' Aid Is Source of Revenue

Another source of revenue is an active ladies' aid society. A hospital of from fifty to a hundred beds should have from 500 to 1,000 members, the yearly dues of $1 from each member being decidedly helpful to the hospital. Each year the society can plan rummage sales, garden parties and entertainments that not only add to the revenue of the hospital but also interest more persons in the work. Our own ladies' auxiliary is now furnishing our new addition of fifty beds, and half of these rooms were promised before the building was started. This will mean a revenue to the hospital of at least $12,000.

Many hospitals are selling annuity bonds as a means of revenue for the hospital. During the last year we have found this an unusually practical way of raising money. By the annuity plan, a yearly sum is paid to the donor for the use of the money given to the hospital. A person seventy years old is paid 7 per cent a year until his death. A person eighty years old is paid 8 per cent a year and a person sixty years old is paid 6 per cent as long as he lives. At the donor's death the money belongs to the hospital. The only expense the plan entails is the promotional material that is enclosed in the literature sent out. The details can be handled from the superintendent's office or by the treasurer of the hospital.

An endowment fund is one of the surest ways of receiving funds. At Lake View we have built up a fund of $50,000 in the last eight years because we have continually urged the necessity for such a fund among our clientele. A field man, a retired minister, was helpful in securing this fund by presenting our cause in the churches of the smaller towns.

The public is the final solution to the hospital's financial problems, and it must be told again and again about the service the hospital offers. If the hospital keeps its good work before the public it will at last respond. This is proved by the fact that we worked for four years for our new wing; to-day we are building it.

Ontario Combats Tuberculosis by Means of Traveling Chest Clinic

A traveling clinic for diseases of the chest for the last five years has functioned successfully in Ontario, Canada, in reaching those parts of the province that are not near a sanatorium and that have no chest consultant.

The objects of the clinic, according to Dr. Gordon Wilson, Provincial Department of Public Health, Toronto, are: to be of assistance to the general practitioner in the early diagnosis of cases of pulmonary tuberculosis; to endeavor, indirectly, to educate the people of the province to the menace of tuberculosis and the means to be taken to prevent and cure the disease; to be a constant reminder to those who have been in contact with tuberculosis of the value of frequent examinations by their family physician for several years after they have ceased to be a contact.

Arrangements for organizing and conducting the clinics are made with the cooperation of the practicing physicians and the local boards of health in the different centers. The clinic is preferably held in a hospital, but if one is not available a hotel or some public building is utilized. The work of the clinic varies from two to six days.

Providing Free Hospital Care for Graduate Nurses

Prophetic of a closer cooperation between the hospital and the nurses' alumnae associations is the plan, now in operation, of the Philadelphia General Hospital and the Presbyterian Hospital, New York City, to provide free hospital and nursing care for its nurse graduates. Adequate provision for the care of sick graduates is made in both hospitals.

The nurses' suite at Philadelphia General Hospital has been furnished by the alumnae and the rooms contain all appointments necessary for the care and comfort of the patients. At Presbyterian Hospital, three rooms have been set aside in the Harkness Pavilion for the care of sick graduate nurses. One room is endowed jointly by the hospital and the alumnae for $50,000. This room is set aside for the use of graduates of the Presbyterian Hospital, but the other two rooms, having been endowed by friends of the hospital, may be used by graduates of any recognized school of nursing.

Hospital care similar to that given the graduate nurses of the Philadelphia General Hospital is given also to any physician whose internship was served there.

Comfortable Living Quarters for a Contented Personnel

By RICHARD RESLER
Architect, New York City, and
S. CHESTER FAZIO
Superintendent, Rockaway Beach Hospital, Rockaway Beach, N. Y.

THE objective of the hospital is "service to the patient." Comfortable living quarters for the personnel are as essential for satisfactory service as are a sufficient number of hospital beds or a modern operating suite. If a town has funds for a fifty-bed hospital and makes no provision for the personnel, it would be far wiser to erect a twenty-five-bed hospital with adequate space for domestics and use the remaining money for a nurses' home. This procedure would eventually save the institution much expense and prove invaluable in maintaining an efficient staff.

Hospital superintendents fully realize that the type of service given to the patient depends upon the capability, efficiency and courtesy of the personnel. A constant number of dependable employees is to them a matter of great importance. Frequent turnover in personnel, whether among the nurses or the domestic servants, results in loss of time and money to the hospital, increased labor for the other employees and frequently in the discomfort of the patients.

The dominating thought of a community, however, when planning a hospital is to provide beds for the sick. The relation between dependable employees and satisfactory care for the patients in

Front elevation of nurses' home, Rockaway Beach Hospital, Rockaway Beach, N. Y.

those beds is but vaguely realized. Therefore, although it is common knowledge that physical and mental conditions influence the degree of efficiency of an individual and the degree of cooperation in an institution, it is often difficult to convince a building committee that this psychological effect must be considered as an important factor when developing the building program.

Large institutions are likely to have suitable quarters. If they are not altogether satisfactory, the personnel have the compensating advantages of working in an institution of note, generally in a city in which there is opportunity for education and amusement, and at salaries larger than those received in a small community. The community hospital offers less pay, less opportunity for advancement, less prestige as a reference and, as a rule, the locality offers little in the way of diversion. Comfortable living quarters as a means to contentment and efficiency are therefore of the utmost importance to the hospital in a small community.

The problems encountered in connection with the maintenance of the personnel at the Rockaway Beach Hospital, Rockaway Beach, N. Y., are undoubtedly typical of those in similar institutions. Rockaway Beach is in the Borough of Queens, one of the five boroughs that comprise Greater New York. These boroughs are an incorporate part of New York City and therefore are subject to the same jurisdiction. Rockaway Beach is, however, about twenty miles from New York City proper and is a distinctly suburban town.

Hospital Serves Summer Visitors

The Rockaway Beach Hospital is a community hospital with a rating capacity of 125 beds. The yearly average of occupied beds is seventy-five daily. The winter average is sixty beds daily. Approximately 25,000 days of treatment are provided annually with charity patients practically making up 25 per cent of this total. The peak load comes during the summer months because Rockaway Beach is within easy commuting distance of New York City and is a popular summer resort. In winter the population of the district served is about 40,000. In summer the resident population is about 200,000 and on week ends it is augmented by another 100,000 to 250,000, depending upon weather conditions.

During the winter months the personnel of the hospital numbers around fifty-six, including the superintendent, three department heads, two interns, twenty-eight nurses (the hospital does not conduct a nurses' training school), an office force of three, an engineer, two firemen, an ambulance chauffeur, twelve domestics and other employees. In summer the number of interns, nurses and the office force is increased until the total ranges from sixty to sixty-five. The number of domestics does not vary throughout the year. The personnel are housed by the hospital with but three exceptions other than the office employees.

The superintendent has an apartment on the first floor of the hospital. It is probable that the majority of superintendents of community hospitals are accommodated in this manner. Few such institutions can afford to maintain a separate residence for the superintendent or to pay a salary sufficient to warrant his establishing a private residence. Superintendents are not all in accord as to the desirability of this arrangement but, despite some inconvenience, the superintendent of Rockaway Beach Hospital prefers to live within the hospital building.

Superintendent Has Many Duties

Because there are few department heads to whom to delegate various responsibilities, numerous duties and activities devolve upon the superintendent and necessitate his almost continual presence in the hospital. In a community hospital a superintendent must be easily available because of the proprietary and sometimes critical interest of some individuals which is based upon an annual membership subscription. These persons expect the superintendent to be in the hospital and, since their "reports" to the community are of importance to the welfare of the hospital, his attention to such interviews is more necessary than in larger and more impersonal localities. In a small community there is also a closer contact between the members of the board of trustees and the superintendent. In the small community the trustees are frequently in the neighborhood of the hospital and call to discuss some matter with the superintendent; in a city they may be some distance from the hospital which means that they can visit it only at stated intervals. The superintendent is also immediately available in an emergency. In order that he need not be unnecessarily disturbed at night, however, the night supervisor of nurses assumes charge from 7 p.m. to 7 a.m.

Interns are usually accommodated within the hospital building, although a few of the very large institutions provide a separate building for them. The question frequently arises as to whether the interns' suite should be on the first or top floor of the hospital. The interns' quarters at Rockaway Beach Hospital are satisfactorily placed on the first floor. The interns have an alternating on and off duty schedule with one night a week entirely free. They are nominally, however, on duty twen-

The sun parlor in the nurses' home provides a pleasant room for leisure hours.

ty-four hours a day and it is therefore desirable to have them near for call.

The interns' quarters consist of one extra large room, with private bath, near the administrative offices and medical board room. There are generally but two interns, although in summer there may be three or four. This single room arrangement has not, it seems, caused any discontent. A really desirable plan for interns' apartments, however, is a suite of individual sleeping rooms, a sitting room and a bath, all on a private hall. A suite of this type is vastly more comfortable for the interns and reduces the possibility of noise transmission.

Accommodations for Nurses

Accommodations for nurses may be provided in one of six ways. The hospital may own a nurses' residence on the hospital grounds or on near-by property, it may rent a building or it may house the nurses within the hospital building, it may pay the nurses' board and the usual salary or it may pay salaries sufficiently large to enable them to board independently. The three last methods are the least satisfactory. Few hospitals can afford to pay salaries required when nurses board privately. Under these conditions a graduate nurse who would ordinarily receive $100 a month and maintenance would demand $200 a month. Experience has proved that it is more expensive for the hospital to pay the additional salary than to provide a nurses' home and maintenance. This objection also applies to the system of boarding the nurses and paying a regular salary. Increase in expense for the maintenance of the personnel increases the per capita cost per patient to the hospital and the rates to the patients proportionately.

Freedom for Staff Necessary

The nurses should not be surrounded by the hospital atmosphere when off duty nor should they have to conform to the "quiet" rules during their hours of enjoyment. On the other hand, the patients should not be subjected to the noise that often results when the nurses live in the hospital. About the only space available for nurses' rooms within the hospital is usually on the top floor. This floor, however, is especially desirable for patients, if it is properly roofed and ventilated, and should be utilized for that purpose. If it is inadequately ventilated it is undesirable for either patients or nurses. This factor should also be considered when determining the location of the interns' apartments.

The trustees of the Rockaway Beach Hospital cannot build a nurses' home on the hospital prop-

erty because of its limited size and because adjoining property is not available. The hospital site was willed to the trustees with the condition that it be used only for hospital purposes. A plot directly across the street from the hospital could have been purchased at a nominal price at the time the original building was erected but the price is now prohibitive. There were no houses near the hospital suitable for a nurses' home that could be rented at a reasonable figure. Finally it became necessary to lease a house across the street from the hospital at the lessor's terms. The owner was aware of the difficulty the hospital would have in obtaining another house in the vicinity and refused to make any repairs. The hospital has been forced to make them, at great expense, for the safety and comfort of the nurses. In fact, the hospital could have borrowed money to build a home at a rate less than it paid annually for rental and repairs.

A more modern building in the neighborhood recently passed into other hands. The new owners, who are kindly disposed toward the hospital, are having it renovated and redecorated and have leased it to the hospital at a reasonable figure. Unfortunately, however, this building is two blocks distant from the hospital.

Proximity to Hospital Desirable

In many instances a hospital is not able to procure a suitable building within ten or fifteen blocks of the hospital. This results in discomfort for the nurses and leads to discontent, and discontented nurses can materially injure the reputation of a hospital. A nurse who comes on duty after a long walk in a biting wind or a driving rain may respond a bit irritably to some minor request of a patient. The patient relates the incident to friends who repeat it to others with embellishments. A few such reports can nullify the most conscientious efforts of the hospital to gain the good will and support of the community. A nurse coming on special duty in response to an emergency call in the middle of the night cannot be expected to walk this distance alone. One of the help must be aroused to accompany her and the ambulance frequently used as a taxi. There is also the possibility of injury to a nurse or employee when she is crossing thoroughfares.

The most satisfactory and economical way, if it is at all possible, is for the hospital to build the nurses' home on the hospital grounds. This fact should be duly considered both by hospital administrators when they are selecting a hospital site and by donors of property. The nurses' home should be built as near the hospital as allowance for the future expansion of both buildings will permit. It should also be so placed in relation to the hospital that noise from the home will not disturb the patients.

A covered passage or subsurface passage connecting the two buildings would be desirable. These types of passages are modified in various ways, depending upon local conditions, and present an individual problem in each case.

Underground Passage Sometimes Desirable

The subsurface passage does not obstruct the hospital grounds but it is difficult to ventilate the passage and at the same time prevent rain or snow from entering. The hot water and steam pipes can be carried along the roof of the tunnel from the hospital to the home. If a covered passage is used the pipes are often run in a trench underneath the floor, made of removable cement slabs. If there is a separate power plant, the pipes can be carried underground to the tunnel or trench. In either case the distance would probably be shorter than to a home across the street and the installation cost would therefore be less. Procuring permits for street excavations and the red tape involved would be obviated.

The amount of coal consumed is not greatly increased and no extra help is required when the heat and hot water for the home are supplied direct from the main boilers. It has been noted at the Rockaway Beach Hospital that the yearly cost of the additional coal required for the separate furnaces at the nurses' home would be of material assistance if applied to the payment of interest on money borrowed to build a new home. Other important savings can be achieved by having the nurses' home on the hospital grounds. In some districts, as in Greater New York, the water supply for all the buildings on the site of an institution is exempt from tax. The supply for hospital buildings on other property must be paid for. At Rockaway Beach Hospital the water tax for the nurses' home amounts to a considerable sum annually. Some gas and electric companies make rate concessions to institutions. The buildings on the hospital site all register on one meter and are billed at the reduced rate. This phase of the location of the hospital buildings warrants serious consideration because of the gas and electric consumption each month. No reduction in rate is granted at Rockaway Beach.

The nurses' home should be a fire-resistive modern building as completely equipped as the hospital funds will permit. Elaborate residences for nurses have recently been constructed but the average community hospitals cannot expect to approach their costly fittings and accommodations. If the hospital administrators and

the nurses cooperate, however, any well planned and modern home can be attractively though inexpensively furnished and decorated.

In general there should be a large living room, a smaller reception room or two, a suite for the supervisor of nurses, rooms for special nurses and a separate bedroom for each staff nurse. It has long since been found that single rooms prove vastly more satisfactory than double rooms. One girl is not irritated by the peculiarities of another and can relax more completely when alone.

A small kitchen, facilities for personal laundering and a sufficient number of lavatories and bathrooms on each floor should be provided. A coat room on the first floor and ample storage space for trunks should also be included. An intercommunicating telephone system connected with the hospital and a pay station for outside calls should be installed to obviate any interference with the hospital lines. If a training school is maintained, lecture rooms in accordance with state requirements will be necessary.

The superintendent of nurses usually resides in and supervises the nurses' home. A competent superintendent of nurses does not care to be far away from the hospital at any time. When the home is on the hospital grounds supervision is easier and there is less likely to be fire or theft since the home is under closer observation.

Utilization of Extra Help

At Rockaway Beach Hospital a girl is employed as maid and caretaker for the nurses' home. If the home were on the hospital grounds she could assist with some minor tasks in the hospital, as do the two pantry girls who, in addition to assisting in the kitchen, perform maid service for the superintendent's apartment and the interns' quarters. A handy man is also required at the home to attend to fires, to shovel snow, to serve in the garden and to make repairs.

It cannot be too strongly emphasized that the hospital must provide a suitable home for the nurses. Students receive their training in up-to-date institutions most of which are in cities where proper provision is made for them. They naturally expect similarly comfortable accommodations when they are employed as graduate nurses.

The idea of having the domestic help live out seems to be gaining in popularity. In a city hospital it may prove more expedient to follow this plan but for the community hospital it is doubtful if it would be practical. When the domestics do not live on the grounds their personal habits can, as a rule, be only a matter of conjecture. A superintendent cannot, therefore, always be sure that discharge for carelessness should be immediate. There may be extenuating circumstances accounting for a temporary inefficiency. When domestics live on the hospital grounds it is easier to observe the individuals and more quickly to note those who are incompetent or undesirable.

Any delay in the arrival of the various employees at the hospital materially interferes with the hospital routine. When the domestics are not on the hospital grounds word must be awaited or a telephone call or a trip made to investigate. In the meantime perhaps half an hour has been lost. The schedule for the day is interfered with accordingly. Illness, oversleeping and the weather are offered as excuses for being late. Heavy snowstorms inevitably cause delay when the employees live some distance away. When the workers live on the hospital grounds none of these excuses is acceptable.

Quarters for Domestics Important

The many financial reasons for erecting the nurses' home on the hospital premises are equally applicable with regard to the location of the living quarters for the domestics. It is necessary that comfortable quarters be provided for the domestics because it is difficult to secure help for a community hospital. Few community hospitals can afford to maintain a separate building for the help although it is the most satisfactory plan. Dormitories are therefore frequently built over the laundry or power plant, or are provided within the hospital building, generally in the basement.

At Rockaway Beach Hospital neither funds nor property limitations will permit the erection of a separate building, nor do conditions permit adding dormitories either over the laundry building or the power plant. The employees' quarters, therefore, are located in the basement of the hospital, which is dry and light. Each person has a single room and there are toilets and baths for men and women. Unfortunately no space is available for a sitting room. The ratio of male and female help required is apt to vary. A movable partition in the corridor would therefore be of great assistance in utilizing all of the rooms provided without upsetting the division of the sexes or interfering with the bath arrangements.

Other important factors requiring consideration in order to maintain an efficient, dependable organization, such as salaries, division of hours and duties and similar details develop with the administration and can usually be adjusted with comparative ease. Comfortable living quarters for the personnel should be considered when the hospital project is first contemplated and provisions made for them.

The Fetish of Fumigation—A Relic of the Past

By D. L. RICHARDSON, M.D.
Superintendent, Providence City Hospital, Providence, R. I.

IT SEEMS hardly necessary to defend the position taken by progressive health officers and hospital superintendents that fumigation is unnecessary. Yet it would appear that many persons still cling to this old fetish.

On page 144 of the October, 1927, issue of THE MODERN HOSPITAL will be found an answer to a question from a hospital superintendent inquiring whether fumigation was necessary. The answer is in the negative. On November 5, 1927, the *Literary Digest* quoted the paragraph from THE MODERN HOSPITAL in answer to this question and stated that fumigation was apparently old-fashioned. Exception to this statement was taken by a professor of chemical engineering in a mid-western university. He is not a physician or he might have known that fumigation during the last twenty years has been gradually discontinued in this country.

Atmosphere Formerly Blamed for Contagion

The practice of fumigation goes back to the time when modes of transmission of contagious diseases were little understood. When germs were first found to be the cause of certain acute and chronic diseases, it was concluded that the atmosphere about the sick person was pervaded with these germs. Seemingly this view was borne out because germs could be found in the air and on the surfaces of the furniture and walls of the room in which the sick person was lying. Many kinds of germs can be found in any room whether it is occupied by a sick person or not. They are distributed widely, but rarely are they disease producing germs. It is true that disease producing germs can sometimes be recovered from the sick room. So the practice of fumigation had some basis of fact. Subsequent experience, however, clearly proved that while disease producing germs in small numbers are to be found in the sick room they are seldom the cause of sickness. The answer to this question was found in the practical experience of surgeons in the operating room and of physicians in hospitals for contagious diseases.

The surgeons eagerly accepted the idea of germ infection of wounds. They instituted the practice of sterilizing instruments, of scrubbing hands and of using sterile gowns. They also sterilized the atmosphere about the operative field with a carbolic acid spray. They found that "laudable pus" in wounds was not necessary, but that if these practices were followed wounds would heal without any infection at all. In practice, however, the carbolic acid spray was so disagreeable to the operator and irritating to the wound and to the patient's skin that gradually the spray was omitted without any increase in infection in wounds. It appeared obvious that while theoretically there might be disease germs in the air about the operative field they did not do any harm. The use of the carbolic spray was abandoned between 1880 and 1890.

In spite of this lesson learned by the surgeons, physicians still clung to the idea that such diseases as scarlet fever, small-pox and diphtheria were air borne. They recognized that they were also contact borne but even more emphasis was laid on air borne infection than on contact infection. Contagious disease hospitals were so constructed that only one kind of disease was cared for in the same building, or in a single ward which was cut off from direct communication with other wards in the same building. This practice resulted in the construction of many separate pavilions. The fear of air borne infection led many authorities to avoid communicating passages from one building to another. All communication between buildings was overground through the open air.

Fumigating Process Widespread

In keeping with this belief in air borne infection, rooms occupied by contagious diseases were fumigated with sulphur or formaldehyde gas in order to kill the germs on the walls and furniture when the patient was discharged from the hospital. This practice was followed in the home where there had been contagious disease. Fumigation was used on shipboard before passengers could land if cholera, small-pox or other diseases had been discovered during passage.

The first hospital to be built in disregard of air borne infection theory was the Pasteur Hospital of Paris which was completed in 1900. Different diseases were cared for on the same floor but in separate rooms. The most important feature of the administration of this hospital was the practice of aseptic nursing. Patients suffering from different diseases were kept absolutely by themselves. All utensils, dishes and nursing materials were sterilized before and after use. In this way both direct and indirect contact was avoided. If this technique was faithfully carried out it was found only in rare instances that patients suffering from one disease contracted another. If the atmosphere had been the usual method of infection, certainly cross infections should have been numerous and continuous when different diseases were cared for in the same ward.

Experiment Brings Revolutionary Changes

The result of this experiment has had a revolutionizing effect upon the construction and administration of contagious hospitals. The method was subsequently introduced into England, the United States, Canada and other countries. Experience everywhere confirms the fact that contagious diseases are not transmitted through air except for a very short distance, one to two feet, beyond the mouth of the patient.

The belief in air borne transmission of diseases received another severe blow when in 1905 Dr. C. V. Chapin, health officer, Providence, R. I., discontinued fumigation after diphtheria. In his annual report of 1908 he showed statistically that there had been no greater incidence of diphtheria in families after fumigation had been discontinued than there was when it was used. In 1908 he discontinued fumigation after scarlet fever and subsequent experience showed fumigation was unnecessary after this disease. Since this demonstration, fumigation has been almost entirely abandoned in this country and Canada and to some degree in other countries.

The uselessness of fumigation was further demonstrated at about this time by Doty, health officer of New York, when he discontinued the fumigation of ships if contagious disease had occurred during passage or if the ship sailed from or touched at a port where cholera, small-pox and other diseases were prevalent. Previously it had been a universal practice to fumigate the rooms and the baggage of patients, which resulted in great loss to both the steamship companies and to the passengers. The United States Government has given up all fumigation on ships except the use of cyanide gas to kill ship rats that might be plague infected. Omission of the fumigation of ships has not resulted in any greater danger to this country from the introduction of acute diseases from other countries. In fact, the discontinuance of fumigation has resulted in the more careful personal inspection of passengers at foreign and home ports, and in the detention in the hospital at Ellis Island and other immigration stations of all suspicious cases for a sufficiently long time to make sure that they are not carriers of disease.

Contagious diseases are spread by sick persons or carriers either by direct or indirect contact and not by environment. While it is true that germs can be found almost everywhere, the germs that cause disease in human beings do not live long outside the human body. There are a few exceptions, such as typhoid germs which may live for a time in water and milk. But when disease germs escape from the body and are exposed, especially to sunlight and drying, they soon become innocuous or are killed. They are out of their natural environment and die like fish out of water.

It is not argued that formaldehyde fumigation when properly done will not kill germs; the point is that it is entirely unnecessary. By the time a scarlet fever or diphtheria patient is ready to be released from isolation whatever germs the patient spread about his room are harmless or so few in number that there is no danger to others so long as the bed linen is washed, mattress and pillows aired and the personal belongings of the patient, which might have been contaminated during his illness, have been boiled, washed or aired in the sunlight. The greatest danger to others is not the room he occupied but the patient himself who may still be harboring germs in his nose and throat, stools and elsewhere in his body. The methods employed in controlling contagious diseases have been revolutionized during the last twenty years. They are much more sensible, and fumigation has no place in the present program of modern preventive medicine.

Mental Disease and the Resultant Economic Losses

The loss of future net earnings of all first admissions to hospitals for mental disease in New York State is estimated to be $105,531,088. The cost of maintaining the hospitals for 1928 was $38,071,165. Adding to these figures the present worth of the net loss of earnings of the new cases entering the hospitals, the grand total becomes $143,602,253. This amount represents the loss in 1928 due to hospital cases of mental disease in New York State. These figures are presented in a study made by Dr. Horatio M. Pollock, director, statistical bureau, New York State Department of Mental Hygiene, Albany.

Will the Consolidated Hospital Supplant the Small Hospital?

By EDWARD F. STEVENS, F.A.I.A.
Stevens & Lee, Architects, Boston

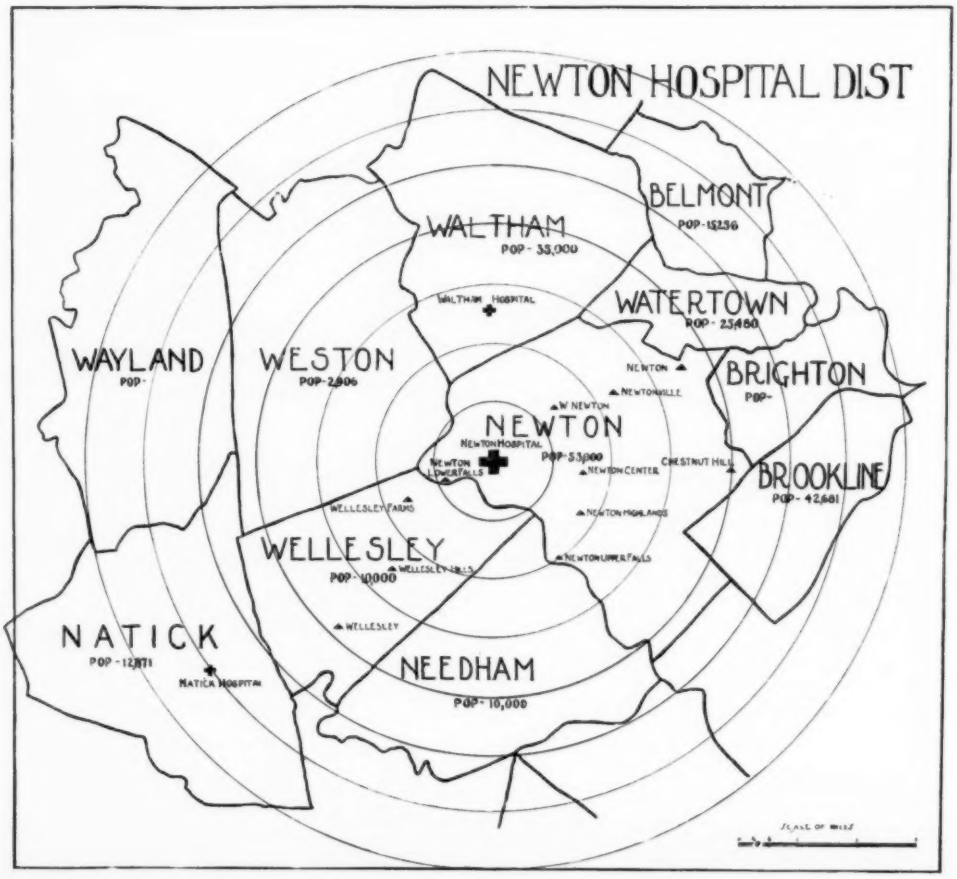
IN THE business world the individual business of the smaller dealer is being absorbed by the bigger interests. As a result a greater selection is made possible by the combined variety of the individual interests represented.

Belonging to the past but still not wholly forgotten are the little backyard shoe shops in which the shoemaker labored over handmade shoes. Here were summer boots for the householder and his family made to order by the farmer-shoemaker during the long winter months. The lawyer and the doctor, also, each had his own small, separate office building. Such a building still stands in Rochester, Minn., and was the original office and clinic of the senior Doctor Mayo.

The day of small units is passing, however, and the interest in community enterprise is increasing. The larger interests are reaching out to offer affiliation and cooperation to the smaller, and this is quite as true in medical as in business organizations. Motor cars and good roads have annihilated distance, so that ten, fifteen or twenty miles offer little hindrance to speedy service.

Statistics show that in New England, with a population of 7,400,000 people, there are 598 hospitals for general treatment, not including the special hospitals, and that these hospitals are caring for 80,765 patients. Statistics also show that 259, or 42 per cent, of these hospitals have less than forty beds and that 176, or 28 per cent, have between forty and 100 beds.

To-day every hospital management desires, or should desire to meet the conditions of the state and of the American College of Surgeons for an A-1 hospital. Some of these requirements cannot be fulfilled by a hospital of less than fifty beds.



The diagram shows the Newton Hospital district in New England where 42 per cent of the institutions have less than forty beds and 28 per cent have between forty and 100 beds.

In this connection three questions arise: Should we continue to recommend the building of the small hospital in the small town or village? Should we urge the sending of patients to the larger city hospital? Or should we advise combining a number of towns within a radius of say fifteen to twenty miles and erecting in one of these towns a district hospital with its greater possibilities?

In an article by Dr. S. S. Goldwater, hospital consultant, New York City, in THE MODERN HOSPITAL[1] on the subject, "The Drift Towards Hospital Amalgamation," he says, "Very small hospitals are a most undesirable way of meeting the requirements of a large community, because hospitals of small size cannot be adequately staffed or, without burdensome overhead, adequately equipped to meet the exacting demands of modern medicine."

Doctor Kolb in an article, "The Service of the Hospital to the Small Community," says, "The very small hospital units are subject to difficulties in attempting to render efficient service to their communities. The leaders quite generally agree that these difficulties multiply when the capacity falls below thirty beds. The overhead charges are too heavy to carry. The volume of business is not sufficient to make possible first-class service with modern equipment."

All over the land interest in the community hospital is growing. An interesting hospital just outside of San Francisco was built by several townships and ministers to their hospital needs. The state legislature of Florida established a hospital for the towns about Daytona, appointed a commission and appropriated money for the Halifax District Hospital, Daytona, which is functioning as a hospital center.

A few years ago Ottawa, Canada, recognized the varying interests of several struggling hospitals in the city. It saw that these interests could be conserved by merging them into one institution. As a result three distinct hospitals were scrapped as far as their hospital work was concerned, and one institution was built and equipped to care for from 500 to 800 patients.

This idea of consolidation is now being worked out by a number of smaller towns in New England. These towns are creating a hospital center, ignoring the town boundary lines, pooling interests and assisting in the erection of the bigger hospital with facilities for proper treatment and diagnosis. Instead of a number of small thirty or forty-bed hospitals there will be one 200 or 300-bed institution.

What are the advantages of the larger unit? The chief advantages are the possibilities of coordination of hospital service, better diagnostic facilities, greater possibilities for more varied equipment, full-time service of pathologists and roentgenologists with a sufficient corps of technicians, better service of food and more equable distribution of service of all kinds as well as larger savings in the purchase of supplies. Then, too, it has been noted that the larger and better equipped the hospital, the greater the percentage of the population that will use the institution. It is also true that increased hospital facilities attract the better equipped young medical men who are looking for a life location. As with every other profession the medical graduate is looking for a field where he may not only do the best service but where he will have the most complete "workshop" in which to render that service. This is also true with the students of nursing, since it may be assumed that with the larger hospital will go the larger training school for nurses.

It is no secret that it is difficult to secure the best class of young women to study nursing. As is the case in every profession, the bright student is looking for the best institution of learning in which to train for her life work. One who is preparing for medicine, law or architecture, is not satisfied to study in a small institution. Similarly, the larger and better equipped the nurses' training school, the better the quality of pupils to be expected.

TABLE SHOWING THE PREPONDERANCE OF SMALL HOSPITALS IN THE NEW ENGLAND STATES

N. E. States	*Population*	*Total in State*	*Forty Beds or Less*	*Forty to 100 Beds*	*Total Hospital Beds in State*	*Active Beds per M Population*
Maine	786,014	65	34	18	5,685	3.3—M
New Hampshire	443,083	53	26	21	4,607	5.5—M
Vermont	352,428	37	19	13	2,984	4.0—M
Massachusetts	3,852,356	320	135	94	47,515	6.5—M
Rhode Island	604,397	31	11	6	5,455	6.2—M
Connecticut	1,380,630	92	34	24	14,519	5.7—M
	7,400,908	598	259	176	80,765	4.8—M

[1] THE MODERN HOSPITAL, January, 1928.

As to economy, we have only to refer to records of relative costs per patient between the smaller and the larger unit. Is is only reasonable to assume that 120 patients may be more economically cared for in one 120-bed hospital unit with one administration than in three forty-bed units with three administrative heads, since one x-ray outfit would easily care for the entire number of patients as would also one pathologist, one group of operating rooms and one kitchen.

With the ever increasing cost of sickness, we must look to every legitimate means for the adequate care of the patient at a minimum cost. The community hospital will offer one means, group nursing another and flexible ward units another, all of which are more practicable in the larger than in the smaller institution.

The accounting and collecting system should be more efficient in the larger unit. Statistics show that the maintenance cost of the average small hospital is about 8 per cent greater than that of the larger unit and that there is a lesser percentage of costs collected from the patients of the small hospital than from those of the large hospital. In other words, to meet the annual deficit in the average small hospital would require an endowment of about $7,250 per bed. An endowment of $3,750 per bed would meet the deficit of the average larger hospital because the overhead of the small unit bears a much greater proportion per bed than that of the larger. Rarely do we find a hospital of the forty-bed class that is self-supporting, unless it is a special doctor's hospital that does not have charity patients.

Small Ward Unit Recommended

Whether we are dealing with a large or with a small institution, the flexibility of the small ward unit is to be recommended. The smaller ward unit adds to this flexibility, and the cubicle ward for semiprivate patients that is now becoming so popular in many of the new hospitals makes it possible to give the patient the virtual privacy of the single room.

The conclusions arrived at by a committee of citizens of a rural community on the advisability of joining forces with a large unit sum up the conditions aptly. "These studies we have made," the report says, "seem to bear out the contention that larger hospitals excel the smaller hospitals in at least three respects: (1) They give a better quality of service; (2) they secure a smaller per diem operating cost; (3) they collect from their patients a larger percentage of their total operating costs and are thus less dependent upon income from endowment or contributions from the communities they serve."

The Hospital of Sixty Years Ago —and That of To-day

Sixty years ago there was only one ambulance in America. There was not a nurses' training school in the United States, or a trained nurse in New York City. There were 1,000 hospital beds in New York City, compared to 34,000 now, according to Homer Wickenden, general director, United Hospital Fund, New York City. At the present time the 200 hospitals of New York City, municipal, public and private, represent a capital investment of more than $100,000,000 and they spend more than $35,000,000 a year on the care of their 550,000 patients.

Mr. Wickenden gives a picture of the hospital of sixty years ago: It had no well equipped accident room, no elevators, no electric light—only dim gas light or oil lamps. It had no x-ray and no trained nurses in trim white uniforms. A patient had none of the advantages of a private room because there were no private rooms. Whether he wished it or not he would most likely find himself in the open ward with persons who were suffering from all kinds of diseases.

The doctor who attended the patient might have been a graduate of a college or medical school. On the other hand he might have been a man without even a high-school education who had served an apprenticeship with a doctor for a few years. New York State did not undertake to license doctors until 1872.

Prisoners Served as Nurses

There were no graduate nurses sixty years ago, although some hospitals were served by various religious Sisterhoods. In some places the nurses were prisoners from the workhouse. One hospital superintendent said that the only requirement he made of women employed as nurses in his institution was that they be sober.

Is it any wonder, then, that only the poor went to hospitals sixty years ago and that many persons looked on the hospital as a place in which to die?

But hospital development and medical science have progressed since that time. To-day the hospital is well equipped throughout. Everything is done to provide for the comfort and quick recovery of the patient. To the fullest extent the hospital has utilized the discoveries and inventions of the last sixty years, in the development of which more has been done than in the preceding 3,000 years.

A few of these discoveries are mentioned: the discovery of bacteria and germs, the methods of transmitting disease, antiseptics for destroying germs, asepsis or the method of excluding germs, x-ray, the fluoroscope, photography, the electric light, the electrocardiograph for measuring the strength of the heart action, the stethoscope, insulin for the relief of diabetes, vaccines and serums for typhoid fever, pneumonia, diphtheria, whooping cough, the ultraviolet ray and radium. With all of these has come increased skill in the use of anesthetics and surgical instruments, the use of the chemical laboratory, the biological and pathological laboratory and the scientific education of the medical staff.

In view of these great discoveries and improvements, it is not strange that the care of the sick has been transferred from the home to the hospital and that the capacity of hospitals has been doubled many times over since 1869. Neither is it strange that the cost of hospital service has increased.

How Much Time Does One Nurse Devote to the Average Patient?

By C. VAN ZWALENBURG, M.D.
Community Hospital, Riverside, Calif.

IN COMMON with other hospitals, the cost of nursing and the size of the nursing staff at Community Hospital, Riverside, Calif., are big problems. The professional salary total for each month constantly frightens us. In comparing our nursing personnel and our professional salary total with those of other hospitals, we find it difficult to make any sort of comparison.

We feel keenly the need of a high grade of teaching in our school and consequently of a high grade of nursing in our hospital; yet the demand for economy has made us anxious. We must needs keep in step with the best practice in our own neighborhood as well as with that in hospitals generally. We have discussed this matter with hospital administrators and superintendents of nurses and have perused the various types of time studies and reports of the number of students in various hospitals. We find, however, very little opportunity for comparison since every hospital is so entirely different in its staff and in its departments.

The time studies can never be minutely accurate, because even with a stop watch, it is difficult to make an accurate estimate of the actual time occupied in a certain procedure, considering the varying distances traveled, the interruptions on the way, the charting, the idle time, and many other factors. With the suggestions supplied by our controller, Mrs. Mabel Pierce Thompson, we have hit upon the plan of keeping a record of the nurse hours per patient day, taking each nursing station as a unit. Our experience in one station, which we call the surgical station because most of the patients there are surgical, illustrates the plan.

Nurse Hours Spent on Surgical Station

The average number of patients for the two months during which we carried out this calculation was 24.5. One floor maid personally serves this station. There is no orderly, no intern or resident. At the end of each twenty-four hours the supervisor of the station, from the nurses' time sheet, makes an accurate total of all the hours that any nurse, graduate or student—excluding preliminary students—has served on this station. She includes the supervisors and any hours the superintendent of nurses may have attended. It would be easy to segregate graduates from students and give their work different values, but, since every hospital has a number of graduates and students on every station, we simply total these hours, computing students and graduates alike. The following calculation is the result.

Table Shows Time Records

On November 5, 1928, the total number of hours of nursing by the entire force was 72. The number of patients for that 24 hours was 19. Dividing 72 by 19 gives 3.78 as the number of nurse hours per patient day for that day. On November 6 the computation was 80 hours with 22 patients—3.63 nurse hours per patient day. On December 18 the number was 76 nurse hours with 29 patients, or 2.62 nurse hours per patient day.

Our records for November and December, 1928, are shown in the accompanying table.

This gives the average number of hours that one nurse spends serving an average patient. By

November	*Patients*	*Hours*	*Nurse Hours per Patient Day*
1	23	74	3.20
2	22	66	3.00
3	22	66	3.00
4	20	66	3.30
5	19	72	3.78
6	22	80	3.63
7	23	64	2.78
8	23	74	3.21
9	23	72	3.13
10	20	64	3.20
11	23	64	2.78
12	22	57	2.60
13	22	67	3.00
14	23	68	3.00
15	27	68	2.52
16	28	67	2.40
17	25	80	3.20
18	21	68	3.23
19	21	64	3.05

November	Patients	Hours	Nurse Hours per Patient Day
20	22	63	2.86
21	21	56	2.66
22	22	72	3.27
23	21	64	3.05
24	21	48	2.28
25	21	83	3.95
26	21	60	2.86
27	20	60	3.00
28	23	64	2.78
29	23	68	3.00
30	24	60	2.50
Totals	668	1999	90.22
Averages	22.2	66.6	3.007

December	Patients	Hours	Nurse Hours per Patient Day
1	25	64	2.56
2	29	77	2.65
3	29	76	2.62
4	31	89	2.87
5	31	76	2.45
6	31	84	2.71
7	32	84	2.62
8	34	68	2.00
9	32	68	2.12
10	26	59	2.27
11	28	68	2.42
12	28	60	2.14
13	27	68	2.51
14	28	60	2.14
15	32	75	2.34
16	27	80	2.96
17	27	83	3.07
18	29	76	2.62
19	27	68	2.51
20	26	68	2.53
21	27	68	2.51
22	29	66	2.27
23	29	76	2.62
24	23	76	3.30
25	20	60	3.00
26	26	76	2.61
27	26	84	3.23
28	28	76	2.71
29	27	68	2.51
30	26	62	2.37
31	24	68	2.83
Totals	864	2231	80.07
Averages	27.8	75.2	2.571

simple calculation a number of interesting deductions can be made from these figures. Putting the two months together we have an average of 2.789 nurse hours per patient day. At fifty cents per hour this makes the cost $1.395 per day per patient. Counting twenty-five cents per hour for students and having half students and half graduates on duty, the cost totals thirty-seven and a half cents per hour or $1.045, the nursing cost per day per patient. The average nursing hours, 70.9 per day at eight hours, means 8.86 nurses per day of twenty-four hours. Therefore, 8.86 nurses for 24.5 patients gives a total of 2.76 patients per nurse.

Comparative figures can easily be drawn for similar stations in various hospitals with a fairly definite comparison of the amount of nursing rendered in the different stations. In spite of the fact that nursing service is relative, that nursing efficiency is relative and that nurses' economy of time is relative, it seems that it would not be difficult to make a reasonable comparison of nursing services. We hope others will give us the opportunity to make such comparisons.

It Pays the Sick to Be Poor —in England

In one respect, at least, it pays to be poor in England, and that is in the matter of hospital service. There the poor are given the best of nursing care in well equipped hospitals, supported in most cases by private donations, and the services cost little or nothing, according to an article in *Hospital Social Service*.

The rich are denied the privileges of the hospital. They must go to "nursing homes," and pay high prices for less satisfactory care than the poor get free. The nursing homes are commercial institutions, usually maintained in makeshift converted dwellings. They often lack most of what in America are considered essentials of a good up-to-date hospital, although the food and nursing care are excellent. England's hospitals are intended primarily for the lower income group and not for the rich.

How Accident Cases Are Mulcting Money From the Hospital

That the hospitals are mulcted out of the money they are entitled to and should receive in accident cases is shown by figures from nineteen New Jersey hospitals compiled by the commission to study state and county aid to general hospitals.

The nineteen hospitals giving details of highway and nonindustrial accident cases they served in 1927 report a total of 1,781 patients with 22,440 hospital days, an average stay of 12.6 days per patient. Of the total of 22,440 patient days, 5,063 were classed as private and semiprivate days and 17,377 as ward days.

To the 1,781 patients were rendered bills totaling $106,089, an average of $59.57 per patient and $4.73 per patient day.

Of the total hospital bill of $106,089, the hospitals have been able to collect only $59,150 or 56 per cent, the difference of $46,850 remaining unpaid to date. Most of the hospitals do not expect to recover in full.

Practical Administrative Problems:

How to Save Money in the Laboratory

By JOSEPH C. DOANE, M.D.
Medical Director, Jewish Hospital, Philadelphia

SINCE the inauguration in this column of the policy of discussing certain practical phases of the activity of the hospital, the word "economy" has been employed many times. It usually has referred to the actual saving of money in the purchase of materials and supplies, although an increase in income in a way accomplishes the same end. It has often been stated, however, that to economize in time is in reality to conserve money. Hence in these sketches reference will be made frequently to ways and means by which the time of the hospital's personnel can be effectively utilized.

In managing the hospital's laboratory, which in reality represents one of the major outlays of money for supplies and salaries that the hospital is called upon to meet, not a few ways present themselves for saving both of these valuable commodities. It is the purpose to discuss here, both generally and in certain phases of the subject specifically, three major angles of laboratory work in the hospital. First, laboratory disbursements, second, laboratory income and third, general economic considerations relating to the conduct of the laboratory.

Physically, the laboratory is often rather remotely placed in relation to the hospital buildings proper. In institutions of size the laboratory often occupies a separate structure. In other hospitals, it is found occupying perhaps a top floor of a main building with access by way of elevators. If institutions in the field generally were surveyed, it would probably be found that in a majority of instances laboratories are placed in an outlying building connected to the main group by corridors or even by uncovered passageways or sidewalks. In the course of the day's work much time is consumed in transporting specimens from the patient's bedside to laboratory desks and in returning reports to the hospital. The waste of time that such an arrangement entails cannot but add to the total outlay of money necessary to conduct the work of the hospital. Not only does such an arrangement represent a waste of time on the part of certain members of the hospital's personnel but it also delays the receipt of reports. In the end this reflects unfavorably upon the patient's chance for recovery and delays his departure from the hospital. Such a result adds to the expense of his treatment and, in the last analysis, if the patient is a free or even a semiprivate patient a portion of this expenditure must be borne by the hospital and in turn by the community. The first way, therefore, of saving money in administering the laboratory is to place this division conveniently.

Other relations, however, besides those that are purely physical demand attention if we are to take full advantage of the scientific contribution and stimulus that the modern clinical laboratory should provide for the hospital. No more difficult problem is presented to the hospital administrator than that which concerns itself with creating an intimate link between the clinician and the laboratorian.

Director Should Work Closely With Others

The director of the laboratory should be just as intimately a part of the hospital as are the physical quarters in which he works or in which the patient is treated. It is frequently a much greater distance to the laboratory administratively than it is physically. The director of the laboratory is too often a foreigner in the clinical circles of the hospital. He is looked upon as one who examines by the aid of the microscopic lens or the test tube inanimate tissues but who does not have in making his diagnosis the assistance of the mental stimulus or of the scientific information that the examination of the patient affords. The laboratory director should be as much a member of the visiting staff of the hospital from a practical standpoint as is the internist or the surgeon. His presence should be welcomed at the bedside, and the ward physician should feel equally at home in the laboratory because a realization of the need for the laboratorian's advice has often led him there. Too frequently is there a lack of knowledge on the part of the superintendent as to the details of the administration of the laboratory. To the average lay superintendent this is a division that by the

turning of its scientific wheels produces information he believes to be of much importance to the hospital patients.

The director of the laboratory, being a physician, usually does not come in close contact with the superintendent of the hospital and as a result he may develop an exaggerated idea of the importance or the autonomy of his own division. The lay superintendent moreover being uninformed as to the necessity for or the use of complicated laboratory apparatus is inclined to assign the requisition and purchase of such equipment to the laboratory director. He is astounded by the size of the bills he receives but he is powerless to curtail such expenses because he fears to take any step that might remove from the hospital patient even a remote chance for his prompt return to health. The director of the laboratory has, therefore, something of a divided responsibility, answering as he does to the superintendent administratively and to the visiting staff for the accuracy of his reports. The superintendent should fully inform himself concerning the type of work performed in the laboratory. He, of course, should be consulted before any extensive and expensive research is undertaken and such research should be initiated only after consultation with the superintendent and perhaps even after the approval of the superintendent's recommendation by the board of trustees.

Careful Check of Property Necessary

Too frequently the laboratorian's interest is centered wholly on the scientific aspect of his work, a fact that leads him to neglect the careful protection of the property of his division. Quarterly inventories should be taken and a careful check on property should be made. When interns are assigned to the laboratory and their services are changing at bimonthly or quarterly intervals, a careful transfer of property from outgoing to incoming interns with an exchange of receipts should be made. It is wise for each intern working in the laboratory to have assigned to him equipment such as blood counting pipettes and counting chambers, this equipment to be stored in a compartment protected by a lock. A careful classification of expendable and nonexpendable articles should be made. Glassware and other valuable equipment should only be reissued upon presentation of the broken parts of the article to be replaced.

An annual inventory of equipment and supplies with a definite budget covering material and apparatus should be made, the amount to be purchased representing the difference between the amount required and that on hand. Laboratory animals should be properly housed and tended. In many laboratories from time to time an epidemic of pneumonia or tuberculosis destroys guinea pigs and mice in large numbers. This can often be traced to carelessness or negligence on the part of animal caretakers. Frequently such a loss is due to a lack of proper quarantine of newly purchased animals. More often it is due to insanitation and lack of cleanliness in the animals' quarters.

The laboratory director should make administrative rounds sufficiently often to keep himself fully informed as to the condition of repair and upkeep of his plant. A requisition on the superintendent for help insofar as cleaners, painters, plumbers and others are concerned should be promptly honored.

Laboratory Fills Many Functions

There are a number of practical returns that the laboratory is capable of rendering to the hospital. Regular, but preferably not routine as to day and hour, culturing of operating room equipment, window ledges and hands of surgeons should be made. The same service should be given to dressing and minor operating rooms where various types of specialty surgery are performed. Such a procedure stimulates care and is likely to save both time and money. The bacteriologic testing of the functioning of institutional sterilizers is a duty of the laboratory. It usually serves as a checking agency on the sterility and chemical suitability of the institution's water and milk supply. It may prepare vaccine for the inoculation of members of the nursing personnel. If there should be a glass blower on the laboratory's staff, he will be able to save the hospital money by manufacturing drip bulbs, simple mercury or water manometers, by repairing blood pressure machines and by performing other services that represent no small outlay of money on the part of the hospital. Whenever food poisoning occurs among the personnel, which should rarely if ever occur, the laboratory is a useful investigative agency.

A detailed laboratory budget should be prepared annually. In it should be listed salaries for personnel and properly itemized requests for funds to purchase supplies and to make necessary repairs. Too often a laboratory director in his zeal to increase the scientific value of the work of his division extends beyond the zone of fairness to other departments the amount he requests for his work. Experience, however, has proved that it is a difficult task accurately to compute and later to justify the amount of money required to run the laboratory. Particularly is this true

if research work is contemplated since the value of such endeavors may be economically worthless or they may be epoch making. In justification of research in the laboratory, it may be said that a very great stimulus comes to the hospital when such work is being carried on, and it may also be stated in passing that even negative reports may fully justify the expense of a considerable sum of money.

There is no standard method of reimbursing the laboratory director for his services. He may be a full-time employee on a more or less adequate salary basis. He may give the hospital but part-time service and receive an honorarium inadequate to maintain him but which he is able to augment by an income derived from other activities. He may work full or part time and receive in addition to his salary a certain percentage of the income derived from performing work for nonresident patients. He may receive a gross amount from which he is expected to recompense himself as well as to bear all of the other expenses including salaries and supplies necessary to conduct the work of the laboratory.

Hospitals Differ in Payment Plan

It is impossible to make any direct and defensible statements as to which of these plans is the best. It is probably true, however, that the majority of administrators prefer to pay their laboratory director an adequate salary and to be able to command his full time for work in the hospital. In smaller institutions the part-time plan, plus a percentage of the receipts, is most likely to be adopted. Whatever scheme is followed, the institution should be able to realize a considerable income from the activities of the hospital's laboratory. It may be added that if the percentage plan is to be tried, the income of the laboratory director is computed on a percentage of the net rather than of the gross receipts.

It has been said that once the laboratory director has decided upon the amount and type of supplies necessary, the purchase should be made only by requisition upon the superintendent. It is a mistake to permit irregular methods of buying to be maintained in any division of the hospital. Although the emergency purchase of chemicals or supplies is sometimes necessary, a procedure should be developed whereby proper permission to purchase can be promptly secured from the supervisory officer of the hospital. Supplies should be purchased in amounts covering quarterly, semiannual or annual needs, so that quantity prices can be secured. The responsibility of the laboratory in furnishing the departments of the hospital with adequate supplies of specimen bottles and other containers, with request and report forms, varies with the institution. In some cases such supplies are kept in the general storehouse and are issued on requisitions from the ward supervisor. Some advantage may be gained from having all specimen containers issued to the laboratory and disbursed to the ward by this division. In this way the laboratory can replenish its stock direct from the institutional storehouse when it is unable to fill ward requisitions. It may be better, however, for the administrator to have more direct control over the issuance of these articles. Considerable difficulty and expense are entailed in a successful attempt to keep a supply of adequate specimen containers continually on hand.

Waste is inevitable unless some efficient system of control is worked out. The laboratory is usually responsible for furnishing the wards with culture tubes, and an inspection of ward refrigerators should be made from time to time by representatives of this division to secure the return of culture tubes and media that, due to age, have become unsuitable for use. In not a few institutions the ice boxes of ward units are found to contain culture tubes many months old that are incapable of rendering any bacteriologic service. It should be strongly stressed at this point that improperly collected or preserved specimens are the cause of much waste since the reports received from the laboratory following their examination are unreliable and often misleading.

Useless Laboratory Work Expensive

When it comes to the question of comparing the amount of work performed by the laboratory with the cost of the work, not a little difficulty is likely to arise. Much money is being wasted in our institutions because of the existence of an unwise policy of swelling the quantity of laboratory work at the expense of economy and even accuracy. Too often there is little or no supervision on the part of members of the visiting staff as to the type or amount of work requested from the laboratory. The intern is too frequently the sole judge and originator of such requests. It may be interesting from a statistical standpoint to learn what a complete blood chemistry study of a patient may disclose. On the other hand considerable time is required for this study which may after all shed no light on the patient's condition.

In some institutions the symptoms of decadence in clinical study and of the ascendancy of laboratory work are plainly seen. It is a decided mistake to allow young physicians to rush to the laboratory for information that could be secured

by the use of ordinary clinical measures. It is, therefore, suggested that the establishment of a plan for routine studies on certain types of cases is basically sound. No one would begrudge a ward patient suffering with an unexplained anemia a thorough laboratory or other specialty study. On the other hand daily or every other day urine examinations on many types of cases are utterly useless and downright extravagant. No patient should go to an operating room for a major procedure without a blood count, a urinalysis and perhaps an estimation of clotting and bleeding time. Hence while essentials in the study of patients must not be neglected, it cannot be too strongly explained to resident physicians, to junior and even senior staff members, that the request of ill considered laboratory studies is improper and at the same time conducive to the waste of money.

If it were possible for a standard of routine studies to be laid down, as is apparently the case in some hospitals, a forward step would have been taken in preventing waste in the laboratory. It is hardly possible for a visiting physician personally to order all such studies. The intern is expected to present information regarding the new patient that will enable the visiting physician on an early visit to arrive quickly at a diagnosis. If this is not done, the time of the patient is wasted since his stay is prolonged and the hospital is likely to suffer financially. The performance, for example, of a blood culture at the proper time may be life saving, whereas the ordering of such a study on a patient with an evening temperature and signs of a tuberculous chest infection needs only to be mentioned to be condemned. On the other hand, it may be said that too much laboratory work is safer for the patient than too little and that the director should strive to strike a happy medium between these two extremes.

No Standard for Work Measurement

When the superintendent of the hospital wishes to learn whether or not an excessive amount of laboratory work is being performed he finds no standard by which he can measure the work of his institution. In various hospitals one observes from four to ten examinations per patient admitted. If four examinations per patient are adequate then it is the duty of the superintendent to curb requests that aggregate twice that number per patient. As an example of the difficulty of gauging the work of the laboratory, the following instance is narrated.

In a seventy-five bed hospital 7,400 laboratory examinations were made annually at a total expense of $6,900, or an average of ninety-three cents per examination. In this particular laboratory, $6,200 was spent for salaries and $700 for supplies. No research work was being carried out and the hospital netted $200 for the year's work. In this laboratory there is certainly an inadequate amount of work being done in the study of the patients and there is a distinct disproportion between the amount of work performed and the amount of money spent for salaries. Moreover, there exists a disproportion between the amount of money spent for salaries and that spent for supplies. It would seem in this instance that the superintendent should learn through the organized visiting staff why such inadequate work is being performed. If he can satisfy himself that no more work is needed, he should proceed at once to reduce the amount of money spent for salaries if not that spent for supplies.

Businesslike Methods Favored

Insofar as the income from the conduct of the laboratory is concerned, there is much to be said concerning the installation of businesslike methods in keeping the accounts. Most institutions have originated, through conferences with visiting physicians and others, a rate card covering services that the laboratory has to offer. These charges vary from $1 for a urinalysis to $5 or $10 for bacteriologic work. Much has been written in regard to the advantage of the so-called unit price or flat rate system as affecting laboratory charges. Many hospitals believe that it is fairer to the patient to set a rate covering all needed laboratory work rather than to charge for each item. In one institution $1 a day is added to the room rent for laboratory work. In another a flat charge of $5 is made. It may be said, however, that when a flat rate exists the physician is more likely to study thoroughly from the laboratory angle private and semiprivate patients than he would if he felt that each study was creating an added financial responsibility to the patient.

In some hospitals a flat rate of $25 is set and this covers all charges for study cases. Frequently basal metabolic and electrocardiographic charges are included in this rate. Even a charge of this size is usually an economical method for the patient to secure these services. Whether members of the hospital's personnel, visiting staff and others connected with the hospital shall be furnished free laboratory service when they require it is a matter upon which all do not agree. Perhaps the fairest and simplest way for the superintendent to work out the financial side of his laboratory work would be to arrive at some basis governing the amount of work to be done,

compute its cost and then attempt to set a flat charge that would cover this work, plus a reasonable profit to the hospital.

A few time and money suggestions are mentioned here. Reduplication of effort in filling and copying laboratory requests should be discouraged. A useful form of request card is one that is printed in duplicate and perforated so that half of it can be retained in the laboratory for record. Inexpensive urine report slips should be used instead of the more costly cards. Many hospitals do not file urine reports permanently. The only other hospital request forms necessary are those for histology, photography and perhaps the reporting of gross findings in postmortem examinations. The collection of laboratory specimens by a messenger particularly assigned to this work and the delivery of reports by the same officer would seem to be time saving and efficient. The copying of laboratory findings on the chart by interns is probably the best plan. It may be repeated for emphasis that tardily collected samples of blood or excretions are wasteful and dangerous because of the useless expenditure of time by the laboratory to arrive at what in the end are inaccurate results.

Urines are often improperly collected and preserved, and an inspection of laboratory sheets frequently shows that the urine was alkaline when it reached the laboratory. The study of stools for blood when the patient has not been on a hemoglobin free diet is entirely useless and is a waste of time and money. Too frequently laboratories do not carry out those small economic practices that mean little individually but in the aggregate represent the waste of much money. The redistilling of alcohol for example that has been used in stains or as a solvent is a wise procedure. The raising of laboratory animals when they can be purchased more cheaply is injudicious. Finally because the laboratory is scientific or ultrascientific in its tendency in no way contraindicates that good business principles should prevail in every aspect of its work.

Are Hospital Builders Planning Too Far Ahead?

That what has been done in the past with regard to hospital construction need not be considered a fixed law for the future, is the belief of James Govan, consulting architect, Toronto, Canada. Because of developments that are now taking place, the hospitals of a few years from now will be entirely different from the hospitals of to-day.

"When a hospital is to be built," Mr. Govan says, "the first thing the builders should do is to make up their minds how long they want the building to last. There are two choices. Either a monument of fireproof construction may be built to last for sixty or seventy years; or the builders can go on the assumption that in twenty-five years the hospital will be out of date and plan their program accordingly—to build again at the end of that time. If every hospital were built on the latter basis, there would be less complaint as to the tremendous hindrances under which hospital administrators carry on their work in obsolete buildings."

The hospital should be located away from congested areas, Mr. Govan continues, where the hospital may have greater air space and greater orientation for sunlight. It can be of fire resistive construction without being excessive in cost; it must be quiet and soothing for the benefit of both staff and patients; the cost of the building can be kept down so that annual interest charges and the sinking fund can be reduced or so that subscribed funds can more and more be applied to the care of patients and less to their actual housing.

The building of the future, according to Mr. Govan, will be one where the structural work will be done with materials that are suited to that particular purpose, and the rest of the project will be devised to give greater protection against weather variations. Any construction adopted now for rural or small communities must be such that the mechanics to be found in these communities can build it and should not be dependent upon a lot of unusually skilled labor especially if it has to be imported from distant centers.

Nearly Half of Ward Patients Receive Free Service

Forty-three per cent of the ward patients in twenty-seven general hospitals of the United Hospital Fund group of institutions in New York City are free patients or public charges, and only 57 per cent are pay patients, according to an exhibit of the Hospital Information and Service Bureau at the annual meeting of the American Hospital Association in Atlantic City. The exhibit also attracted much attention at the International Hospital Congress. In the twenty-seven hospitals studied, the percentage of free patients in the wards ranges from 6 per cent to 83 per cent in various hospitals and averages 32 per cent, while the percentage of public charges ranges from 1 per cent to 42 per cent and averages 11 per cent.

The employee population is over one and one-half times that of the patient population, and even this is considered none too high. It throws some light on the high cost of medical and hospital care.

The exhibit indicated that the daily per capita cost of private and ward patients of the twenty-seven hospitals studied had increased substantially during the last five years. The average cost now is $6.16 per patient per day for all patients as compared with $5.39 five years ago. Hospital costs, however, have increased only about 14 per cent in five years, a rate far below that in other fields. The level of salaries and wages in hospitals is still below that paid in most other fields. The hours are longer and the strain on hospital workers is very great.

Slightly over half of the annual expenditures of the hospitals is for wages and salaries. The next largest items of cost in hospital administration, in order, are: food, ice and water, fuel, light and power, medical and surgical supplies, household supplies, repairs and miscellaneous expenditures.

Editorials

Politics and the Superintendent

POLITICS is a state of mind. This may represent an intense love for city, state or nation and the governing motive may be a strong but intelligent urge to measure the wisdom of every policy by the rule that the greatest good to the greatest number must be accomplished. Such a practice represents the practical exemplification of the natural instincts of the statesman.

Unfortunately in the majority of state, county or city owned hospitals, the minds of those in temporary political ascendancy often dwell on lower levels. Their hearing is too frequently dulled to the call of honest, self-effacing service to the sick and needy. Their vision is obscured by the immediate possibilities of self and party gain. Their minds, untrained in the recognition and interpretation of sociologic problems, elaborate faulty conclusions because no ability for the formulation of correct or scientific premises exists.

The system demands that other ends must be served as well as the efficient conduct of the hospital. The care of the sick may even be made a by-product of the relentless grinding of the wheels of a political organization. If the superintendent be a layman, his place is often considered a prize, rightfully belonging to the victor at the last contest for political power. Being untrained in hospital administration even though skilled in getting out the votes, the executive becomes inflated with temporary power and in his endeavor to prove his efficiency to his political superiors, he enacts rules pathetic in their ineffectiveness. The party in power demands perquisites and patronage. Possessing no medical or institutional consciousness, obligated to unseen but very real powers for his position, his judgment clouded by a pleasant appreciation of authority and physical comfort, he placidly acquiesces. Special privileges represented by the placing of political favorites in private rooms, the franking of x-ray charges or even the loan of hospital property are granted as a matter of course.

The superintendent glowing with the approbation of the politically elect accepts without objection the appointment of additions to his personnel concerning whose qualifications he is totally uninformed. He suspends or discharges faithful employees who have too literally interpreted hearsay information relative to their freedom to exercise their right of suffrage. He even supinely permits the removal of departmental heads who though efficient and loyal to the institution's traditions have forgotten that the welfare of the patient, though important, must often be subordinated to political expediency. He listens to the plaintive whine of the petty politician who claims partiality in the case of his refractory protégé who has disobeyed hospital rules and has been punished therefor. He lets it be known that the members of the hospital's personnel are obligated to support the activities of the political organization by contributions, voluntary or otherwise. Professional skill, personal accomplishments, devotion to duty, forgetfulness of self are looked upon as abstract qualities, desirable enough, but which can in no way replace loyalty to the system. The unfortunate executive even though at times mildly disturbed by a protesting conscience relative to some unwise direction from above, knows no other way but to obey. He may even proudly boast in appropriate surroundings of being an "order man."

Fortunately this dark picture is not always present in the governmental hospitals in the field. Exceptions are usually found where long term boards of trustees unaffected by recurring local political changes are given authority over the hospital. Perchance an enlightened public official may have made a fortunate appointment to a public health or welfare post and the evils of political interference in hospital work are temporarily relieved.

Until federal, state, county or city finance committees learn that the appropriation of funds for health and hospital work is their duty as representatives of their constituents and not an act for which they may demand personal favors, the evils of the system will persist. The political superintendent is often but a tool. The administrative sins which he commits must be laid to the official stupidity, the sordid selfishness, the sociologic obtuseness of others.

Action Needed Against Proposed Higher Tariff on Soaps

AMONG the new tariff changes that directly and adversely affect hospitals is the proposed increase on the duty levied against the importation of oils and fats used in the manufacture of soaps.

The new tariff would increase soap costs 50 per cent, which means to hospitals in the United States an additional bill of close to $9,000,000 a year for their soaps.

At the present time it is estimated that a hospital of 100 beds spends approximately $2,000 a year for soap, or $20 per bed. The proposed tariff would raise this to $30 a bed, making a total soap bill of $26,250,000.

Every hospital superintendent in the country should take steps to fight this proposed increase in the cost of hospitalization. While the addition of $10 a year per bed seems slight, it really means that the poor and persons of moderate means will feel this increased cost the most. It is impossible to reduce the amount of soap used in hospitals, which leaves only one alternative—to spend more money. There is no justification for this increase and no benefits will accrue even to the farmer whom the bill has been designed to aid. The oils and fats now obtained from farms and used in the manufacture of soap are such a slight percentage of the total that they do not deserve any consideration.

Several hospital people, including Bird S. Coler, former commissioner of public welfare of New York, have appeared before the senate committee, urging reconsideration of this part of the tariff revision, and it is sincerely hoped that all hospital administrators will immediately get in touch, either directly or through their boards of trustees, with their representatives in Congress, so that hospitals will not be forced to pay this more than twenty-six-million-dollar additional bill.

Research as a Means of Discovering Truth

AT THE meetings held this summer it is probable that the word "research" has been used more than ever before. Several propositions are now before hospital and health people for more research work, not only in hospital laboratories but research regarding business procedures and methods of conducting hospitals and sanatoriums.

It cannot be denied that while much surface studying has been done in the hospital field, little serious and exhaustive research has been carried on in regard to the various functions of hospitals and of superintendents. Much of the investigative work has been done by hospital publications and some of it has been very much worth while. Individual hospital administrators have from time to time made valuable studies but the results have mostly been kept to themselves.

With organized research under competent supervision and with full cooperation between all agencies serving the hospital field, there is no question that hospital efficiency, hospital economy and hospital popularity would be much enhanced. Care, however, should be taken that the studies made are actually research and not propaganda, that the strong opinions of one man shall not be confused with the actual finding of facts, that sentiment shall not be swayed by self-appointed leaders and that the vicious element that seeks only self-aggrandizement shall have no voice in the research that is to be done. It is time for bickerings and jealousies to be shelved, for trouble makers to be suppressed, so that we may all join in a whole-hearted effort to improve the hospital field rather than exploit it.

A Relic of the Past

TO THE ancients, disease was sent by an avenging god as punishment for some offense on the part of erring mortals. Whence it came or how it departed was wrapped in a veil of mysticism and superstition. Indeed, many of the barbaric practices of early man were carried out with the sole aim of rendering the human body an unsafe or at least an uncomfortable dwelling place for evil spirits.

'Tis not a far cry from the day when a large percentage of those who submitted themselves to the surgeon's knife were required to undergo long days and nights of suffering in order that laudable pus might finally cease to flow. In pre-Listerian days the air of operating rooms was redolent of carbolic acid. Men endeavored to destroy infective material in the air by means of germicides, before it could find a lodging place in the human tissues.

Surgeons of earlier days remember the professional scorn with which the theorems of Lister and Pasteur were received by physicians of the day generally. With the development and general acceptance of the germ theory of disease dawned a new era in the study of the etiology, pathology and treatment of many erstwhile lethal conditions. But for many years the bacteriologic cause of conditions termed contagious remained shrouded in mystery.

The principles underlying fumigation are but slightly removed from those that prompted physicians to fill operating rooms with carbolic mists. Nevertheless until but recently few have dared to risk criticism by proclaiming and putting into practice the theory that scarlet fever, measles, chicken-pox and others of the erroneously labeled minor contagions could be safely handled without the use of gaseous disinfectants. Indeed, in perhaps the majority of hospitals, following the removal of a patient suffering with conditions of this sort, rooms are sealed and formaldehyd or sulphur generated therein.

Came the pronouncement of the streptococcic origin of scarlet fever. Came the belief or at least the partial proof that measles and chicken-pox are produced by specific organisms. With this knowledge there has developed in the last half decade or more the opinion on the part of scientists that such diseases are transmitted by soiled hands and bacteriologically unclean gowns. Mystery gave way to convictions and suppositions to scientific facts. If this theory be true, the hospital world can safely revise its practice relative to the institutional handling of contagious diseases in the protection of persons brought in contact therewith.

On page 90 appears an article by a physician whose experience in a large hospital for contagious diseases has taught him much relative to the successful handling of contagion. The practice of the so-called aseptic technique, which is founded on nothing but a common sense interpretation of scientific principles, is sufficient, it would appear, to prevent the transmission of contagious diseases from the bodies of the infected to those of the well. If this principle be followed to the ultimate end as has been done in the Providence City Hospital, Providence, R. I., it becomes merely a matter of perfecting the technique of the ward personnel to make safe the treatment in the same room of such varied conditions as scarlet fever, measles and chicken-pox. Fumigation has an appeal to the superstition of the public. As a scientific practice it appears that it should be relegated to the place of a pre-antiseptic procedure, interesting as a relic but, in the light of twentieth century institutional knowledge, economically and scientifically useless.

Talking It Over

IF THE intern would turn out well, he must turn in early, turn out early, turn to industriously, turn up work and turn down dissipation.

* * *

EVERY training school should have emblazoned on its portals, *"Dei laboribus omnia vendunt"*—the gods sell all things to those who labor. In other words, labor is the price of all things. Nothing is given away. Everything must be paid for by physical and mental sweat. The apple that drops in your lap is usually rotten.

* * *

KEEP moving! A jackass plods along slowly and when the flies bite him, he kicks. When you meet a chronic kicker, you know that he doesn't move fast enough to keep the flies off him.

* * *

"IF YOU are not satisfied with your lot, build on it." Dissatisfaction that takes it out in being dissatisfied, gets no place; dissatisfaction that stimulates correction is the parent of accomplishment. If you put action into dissatisfaction, you improve your lot; otherwise it is an unimproved property, overgrown with the weeds of disappointment.

* * *

LIFE, disease, death—these things are difficult to define but as the stimulant of an argument these may do: Life is the reaction of the individual to his environment. Disease is the unsatisfactory reaction of the individual to his environment. Death is the absence of reaction of the individual to his environment.

* * *

LIFE is made up not of great sacrifices or duties, but of little things, in which smiles and kindness and small obligations, given habitually are what win and preserve the heart and bring joy. It is the little things of life that make or wreck happiness. Most of us can find courage to meet big sorrows and to rise above them. Heroism on the fighting line is a thing of impulse, of quick reflex—one moment and it is over. It takes a far more refined quality of bravery daily to face small irritations, little injustices and unkind pinpricks. Those who can do so day after day and remain kindly and smiling are the real heroes. Conversely, it is the small pleasant surprises, the unexpected generosities, the tactful compliments, that bring greater happiness than the magnificent gift or the possession of all those things which we think we want but which when attained too often fail to satisfy, unless they are accompanied by the little everyday joys that bring the real peace of mind which is what true happiness is made of.

* * *

ON July 8, 1800, Dr. Benjamin Waterhouse, the first professor of theory and practice in the Harvard Medical School, vaccinated his son, Daniel, a lad of five, against small-pox. This is supposed to be the first vaccination in the United States. After 129 years, we cannot say with truth that our entire citizenry is immunized against small-pox, a sad comment on our national intelligence or our powers as sanitary salesmen.

* * *

WHEN an English speaking person recalls the history of exophthalmic goiter, he thinks of Graves; the French and the Germans recall Basedow but an Italian remembers Giuseppe Flajani, who was born at Ancarno on July 4, 1739. A surgeon of great ability, an anatomist of note and a teacher of high merit, he was honored by most of the scientific societies of Europe. In 1798 he began the publication of his scientific observations, which ran until 1803. It was thus that he gave what is believed to be the first description of exophthalmic goiter, which to this day is known in Italy as the *"morbido Flajani."* This antedated the work of Basedow by thirty-seven years and that of Graves by thirty-two. He was one of the first to contend that syphilis was not introduced into Europe from America.

* * *

AN ADVERTISING blotter with a scale in inches across the top suggests an idea for the popularization of the metric system. The average nurse and physician are still not metric-minded. Advertising blotters showing the metric scale instead of the inch scale will attract the attention of the hospital field because they will be helpful.

YOUR EVERYDAY PROBLEMS

A department devoted to the informal discussion of problems arising in the everyday life of the hospital superintendent.

[No attempt has been made to offer final conclusions relative to the questions considered in this department. THE MODERN HOSPITAL will gladly welcome further comment by its readers on any of these problems, or the presentation of other queries for discussion in later issues.—Editor.]

How May the Work of Private Floor Graduate Nurses Be Checked?

Under the system in vogue in most hospitals, it is possible for the careless and tactless nurse to go on more or less indefinitely from one patient to another rendering neither satisfactory service to the patient nor to the physician. In some hospitals a card report relative to the type of service the nurse has rendered is required from each physician at the conclusion of the case. To some, this practice appears objectionable in that it smacks of espionage. There is no basis for this belief. If the nurse appears to show little interest in the progress of her case and displays a lack of initiative in anticipating the needs of her patient, the registry placing her should be informed of this fact. In such an instance she should not possess the same efficiency rating as one who has more positively endeavored to please.

Of course at times the personality of the nurse and that of the patient will clash or the physician, for the same reason, does not approve of the nurse. All of these facts should be taken into consideration when reports are submitted at the conclusion of the nurse's period of engagement. Whatever system is employed, some way of recognizing good work and of frowning upon poor service should be devised. The report card system, signed by the physician, appears to be one of the methods to be commended.

Is There Any Basis for Grading a Patient's Ability to Pay for Hospital Care?

The answer to this question is being sought by many institutions. As yet, no adequate and sufficient yardstick has been discovered to enable an institution to measure accurately and justly the patient's ability to pay. Many human factors and frailties enter into the problem. Yet there is such a tendency on the part of some patients to attempt to evade the payment of a just bill for hospital service that a suspicion is aroused as to the fair dealing of all. There is no basis, in fact, for such a generalization.

It is encouraging to note that there is a great class of persons in this country who may be termed "pay as you go citizens," who refuse to be pauperized and who are anxious fully to reimburse the hospital for its services. In some localities a set of regulations has been adopted which attempts to particularize in regard to income, size of family, the possession of an automobile or real estate and the type of dealing the patient has had with other hospitals. These regulations also take into consideration numerous other factors. Such rules can only be made to be broken, but it may be said that an attempt to lay down some standard of this type is laudable. For example, it is decidedly unfair to the patient and the hospital to allow free treatment to be given if the man or woman possesses an ability to pay either all or a part. This is true from the patient's standpoint, because many contributors to the upkeep of the hospital are persons of moderate means who are willing to give to the institution although they receive no immediate benefit from it.

Any program that has for its object the establishment of a system to prevent pauperization, thus guaranteeing fair dealing to the hospital, but which at the same time avoids the infliction of a hardship on those who are ill is to be commended. The establishment of a modern credit department with the careful interviewing of applicants, an adequate but kindly follow up system that checks the facts as set forth on the patient's application sheet, are but primary principles in carrying on this type of the hospital's work. The dollar mark should not be placed on the portals of the hospital and the practice of scientific humanitarianism should not be slighted, but it can be said just as forcibly that the hospital should prevent imposition upon its humanitarian spirit by those of dishonest instincts.

Should Hospitals Supervise the Religious Rite of Circumcision?

In almost every institution containing a maternity service, there has arisen the problem of the proper control of the technique in the performance of the religious rite of circumcision. Some hospitals look upon this procedure as purely surgical and refuse to allow its performance except by a member of the surgical staff. This plan is not altogether satisfactory to the parents of the child concerned and usually brings about the premature removal of the mother and baby from the hospital.

In other institutions, the board of trustees appoints from without the hospital a person whom it believes to be fully capable of performing this work in a bacteriologically cleanly manner. Hospitals justifiably maintain that they have the right to direct that antiseptic precautions be taken in the performance of a circumcision and that in so doing they are protecting the welfare of the patient and the reputation of the hospital. It would seem that this policy is justifiable and that a well qualified and responsible person having been chosen, the hospital will be protected in a greater measure in this way than under any other scheme.

No matter what type of medical or surgical treatment is performed in the hospital or whether its aim is wholly curative or religious, the executive must enforce the highest standards of technique. The religious rite of circumcision is no exception to this rule.

What Are the Benefits of Admitting Students to Hospital Wards?

A nonteaching hospital is contemplating seeking some affiliation with a medical college which is providing both undergraduate and graduate teaching. Within its board of trustees there is uncertainty as to the wisdom of permitting students to work in the institution's wards. THE MODERN HOSPITAL is asked to furnish an opinion as to the benefits the hospital might expect to derive from teaching.

There is no question but that the entrance of medical teaching within the hospital brings with it a definite stimulus that is beneficial to the morale of the institution. Patients are more carefully studied, and while some may at first be annoyed by being demonstrated to a class, the majority do not object. Indeed, some patients look with pride upon the fact that their condition is puzzling to the extent of being considered worthy of demonstration.

The staff in a teaching hospital is usually on the continual qui vive because its members have a natural urge to study thoroughly each case demonstrated. The members of the intern staff fear the embarrassment of being asked before students for information concerning physical or laboratory findings that they are not able to furnish promptly. The hospital receives beneficial publicity when it is known that certain outstanding teachers are to be found on its staff. The public prefers an institution in which teachers of medicine work.

The nurse does not escape the beneficial results of this teaching, and while students in and about a hospital cannot be said to be an unalloyed joy, in the long run they pay for the trouble they are likely to cause. An important by-product of hospital effort is one of education —not alone the education of interns and nurses, but the preparation of undergraduates and graduates in medicine in order that they may more fully fulfill the obligations of the general practitioner and specialist that they will so soon have to undertake.

How Can the Country Hospital Best Conduct Its X-Ray and Pharmacy Departments?

This question has been asked the THE MODERN HOSPITAL by an institution of eighty beds. The community in which this hospital is located has a population of about 30,000, divided among several small towns. It is sixty miles from a large municipality. The physicians in this community are not interested or skilled in the performance of x-ray work. Pharmaceuticals have been purchased from local druggists.

This problem has presented itself to many administrators of small hospitals. The difficulty of its solution has brought about the performance of inferior x-ray diagnostic and therapeutic work as well as the maintenance of a pharmacy which has been found to be unusually expensive in upkeep.

Some small institutions are able to combine the technical work of the x-ray and pharmaceutical departments and to secure a skilled and willing technician who can and will perform the duties of both. A member of the visiting staff, who has devoted himself to x-ray work, may be persuaded to give an hour of his time daily to the interpretation of x-ray plates. In one hospital he was paid $500 a year for this work. The salary of the technician who performed this combined work was $135 a month. This arrangement worked satisfactorily. On the other hand, it has been found difficult to secure the services of a physician who is competent to read x-ray plates. To secure a competent resident technician appears more simple.

Some small hospitals have found it necessary to recompense a roentgenologist, visiting the institution at least tri-weekly, to the extent of one-half the gross receipts of his department. Sometimes it is possible for several institutions to unite in dividing the services of one competent physician. This solution should be seriously considered by hospitals that are experiencing difficulty in properly staffing these important departments.

Another institution has been able to secure a nonmedical roentgenologist who was also able to dispense pharmaceuticals. And still another institution secured this type of person to perform both the x-ray and clinical laboratory work. It is questionable whether the hospital should permit the full charge of the x-ray department to be assigned to a nonmedical man. It would be safer to adopt this policy in regard to the clinical laboratory. On the other hand, in some institutions it may be absolutely necessary to secure such aid. It may be said in passing, that frequently a nonmedical x-ray and laboratory director develops a degree of skill not surpassed by the average physician. Where a resident physician is available, the supervision of the x-ray and pharmacy departments may be assigned to him with a skilled technician actually performing the work.

Whatever expedient is tried, the hospital must have constantly available the services of someone who would be able not only to perform routine work but also to render emergency service in accident cases.

Should a Vacation Be Allowed at the End of a Service?

It has been said that a vacation is a preparation for the coming year rather than a reward for faithful work during the past. This statement contains much truth and practical fairness. A member of the hospital's personnel, whether it be a nurse, social worker, engineer or laundryman, frequently decides during the Spring months that he will be benefited by a change in location. He may not have been aware of this probability until shortly before the time arrives for his vacation. He has given long and faithful service to his hospital, and wishes to undertake his new work refreshed as a result of having had a rest period. Should the first hospital grant this vacation?

The answer to this question is sometimes to be found in consideration of the record of the person particularly involved. A long, faithful period of service would seem to justify the granting of a vacation to one, while the lack of such a record might justify its refusal. It is sometimes disturbing to the hospital to be required to delay the engagement of a new employee until the departing worker has concluded his or her vacation. On the other hand, it is necessary to carry on in some way during their absence the work of all on vacation. The difference in this instance lies in the fact that one who has resigned cannot do his part in carrying the vacation burden for those who made his absence possible.

Some institutions require that vacations be taken first, and later, if the employee desires to leave, he must return to the hospital and serve for a definite period of time at the conclusion of his rest. This policy would seem to be somewhat evasive and hardly a solution of the problem.

It may be said, however, that while the principle stated at the beginning appears just and fair, in unusual cases a vacation should be considered as a reward for past services, although the employee receiving it has severed his connection with the institution.

What Charge Should Be Made for Tonsil Cases?

In a statistical study made recently in an Eastern hospital, it was found that 20 per cent of all the operations performed in that institution were tonsillectomies. Further, in computing the hospital's revenue, it was discovered that in but 40 per cent of these operations was the hospital paid its full rate.

It has been the custom in this hospital to admit ward tonsillectomies through the social service department, the financial investigation determining the question of payment or nonpayment of a fee for the operations. The fee in this institution is $11 for ward cases. Inquiry has brought out the fact that a higher percentage of pay cases is often found in other institutions, and that the fees range from $10 to $15.

THE MODERN HOSPITAL is asked to suggest the most efficient system for the admission of tonsil cases, as well as to furnish information as to the customary scale of charges.

It is a well known fact that in the late summer the hospital is required to perform a large number of tonsil enucleations to enable children to pass the examination of the schools' medical inspectors. Most of these cases are ward cases. It would seem that it would be wiser to set a flat fee to cover the expenses of what is usually a two-day stay in the hospital, including the cost of anesthesia.

In most instances a family should be able to pay the hospital for its services, and it would appear that $10 is a reasonable charge. On the other hand, when a thorough social service check-up reveals an actual inability to pay, a procedure should be initiated to make it possible for the hospital to do this work free.

It might be wise for the hospital to set a special tonsil day for free cases, just as it has been found that free and pay clinics are better conducted at different hours. It avoids the natural query on the part of those who pay as to why others are permitted to secure the same services without charge.

There appears to be no reason why from six to eight or even more patients may not be operated upon the same day. Since these little patients require special nursing on the first night after the operation, such an arrangement would probably be financially advantageous to the hospital. The experience of some institutions is that as high as 80 per cent of ward tonsillectomies are full-pay cases.

A member of the visiting staff or his assistant should be responsible for this clinic. Patients should be carefully examined, possibly in a dispensary, and it is often required that a clotting time be taken on each patient prior to every operation. Tonsillectomies are major procedures, and their performance should not be relegated to the class of operations safely performed by inexperienced interns and characterized by faulty preoperative preparation and study.

What Is the Relationship of the Housekeeper to the Chief Nurse?

Upon a number of occasions THE MODERN HOSPITAL has discussed this question. Since, however, it has arisen again in the form of a question from a nursing executive in the East, brief mention may be made here of some points touching this matter.

Many hospitals do not possess a housekeeper who is wholly responsible for the cleanliness of its wards and rooms. Not infrequently the maids and housemen performing this work are directly under the supervision of the head nurse in each department. This system has the advantage of avoiding crossed lines of authority. On the other hand it must be said that the average head nurse does not particularly relish the supervision of the work of cleaners, porters and ward maids. Her training has been in rather another direction. She is more interested in the practice of scientific nursing. Hospitals working under this system often experience difficulty in maintaining cleanliness and sanitation. A good practical housekeeper is more interested in the intimate details of the work implied by her title. When this system is used, maids, porters, floor men and window washers are responsible to her and through her to the superintendent.

Tactful contact with the head nurse by the housekeeper often prevents friction, but basically this scheme has some serious difficulties. A nurse expects to work in clean surroundings. When the above plan is operative, she has no authority to direct the work of cleaners, maids or wardmen. She must either go to her superior officer, who in turn discusses the matter with the superintendent, or she must disregard lines of administrative travel and complain to the housekeeper herself. Herein lies the danger of friction. Class distinctions enter here and housekeepers, being sometimes supersensitive, feel that nurses are inclined to exaggerate complaints.

In large departments where a supervisor is placed over several head nurses, an assistant housekeeper under her direction might prove a satisfactory arrangement. When an active superintendent is fully informed concerning the grade of housekeeping being carried on in his institution, there is likely to be no ground of complaint on the part of nurses. This, perhaps, is the best solution of the problem. Many head nurses are glad to be relieved of housekeeping tasks and responsibilities. On the other hand, it would seem that they should not be entirely relieved from the work of maintaining clean, airy and sanitary wards and rooms in which patients, under the care of their subordinates, are being treated.

How Can Smoking Rules Be Enforced, and What Should They Be?

Hospital administrators have been having difficulty in regulating smoking within the institution. This affects not only the patients and visitors but also the resident and visiting staff.

Eminent physicians have been known thoughtlessly to walk through hospital corridors and even wards while smoking cigarettes. Interns are not slow in imitating this practice. Visitors at times smoke in general waiting rooms, and patients often smoke in hospital corridors.

There are several reasons why this should not be done, but the comfort of the patient and the prevention of a definite fire risk are perhaps the most important. To prohibit the smoking of private patients outside of their own rooms, except in certain areas adjacent to solariums or other lounging places, seems to be fair. To prevent ward patients from smoking within the confines of the area where patients are being treated is a sound policy. To forbid interns from smoking about hospital corridors, and certainly to prevent chiefs from setting the example are rulings that need no justification.

Such rules should be prepared by the superintendent and approved by the board of trustees. Ward supervisors must be given the fullest support in enforcing these rules and, of greatest importance, no exception must be made whether it be the case of the president of the board or the chief of the visiting staff.

NEWS OF THE MONTH

San Francisco Meeting Attracts Many Hospital Social Workers

THE American Association of Hospital Social Workers held its annual meeting in conjunction with that of the National Conference of Social Work in San Francisco June 24 to July 3. The attendance at the meetings averaged around 125, and all parts of the country were represented, a considerable number of delegates making the journey from the Eastern coast. To the exhausted travelers who had crossed the desert during a country-wide hot spell, San Francisco with its refreshing breezes from the bay seemed a haven. Furthermore, the city lived up to its reputation of cordiality, sunny skies and flowers in abundance.

The association first held its business meeting at which the following officers were elected for the coming year: president, Edith M. Baker, Washington University School of Medicine and Allied Clinics, St. Louis; first vice-president, Ruth Emerson, University of Chicago Clinics, Chicago; second vice-president, Ruth Wadman, American Red Cross, Washington, D. C.; third vice-president, Gordon Hamilton, Presbyterian Hospital, New York City; secretary, Elizabeth Gardiner, University of Minnesota, Minneapolis; treasurer, Kathleen Allen, University of Chicago Clinics, Chicago; members-at-large, executive committee, Elizabeth Nairn, Vanderbilt Hospital, Nashville, Tenn., Janet Thornton, Presbyterian Hospital, New York City.

At the annual dinner Dr. William P. Shepard of the Metropolitan Life Insurance Company acted as chairman.

Tells of Hospital Frontiers

Ida M. Cannon, chief of social service, Massachusetts General Hospital, Boston, was the speaker of the evening. Taking as her subject, "Our Frontiers," Miss Cannon said that social workers had resembled "squatters" when they first came into the hospitals but that their position as an integral part of hospital organization is now assured. The most important frontiers now are those bordering on the neighboring professions of medicine, nursing and social science, she stated. Miss Cannon showed how increasingly closer working relationships with these professions could be attained. She closed her talk by inviting everyone to Boston next year to attend the 1930 convention of the National Conference of Social Work and to participate in the celebration of the twenty-fifth anniversary of the social service department of the Massachusetts General Hospital.

The association held a joint meeting with the division on health of the national conference at which the subject of discussion was the social and public health aspects of syphilis and gonorrhea. Papers by Dr. William F. Snow, American Social Hygiene Association, and Ora Mabelle Lewis, Massachusetts General Hospital, were read and discussed. Speakers agreed that both doctors and nurses should know more about the social and medical aspects of the diseases and that every patient must be individualized.

The hospital social workers held a number of smaller meetings and discussion groups at which problems relating to their own practice were discussed informally and frankly. An increasing effort is being made to discover just what activities the social worker should perform in order to assist the hospital most effectively in the treatment of patients, it was shown. At the same time that they are defining their function, social workers at schools and universities all over the country are working out educational courses that will best prepare the student for her vocation. There was discussion also of another technical problem, the need for and method of formulation of a terminology. Toward this end, social service departments in various parts of the country are experimenting with the medical social terminology worked out at the Presbyterian Hospital, New York.

Social Worker Is Cooperative Link

One interesting meeting discussed the social service department as a means of furthering cooperation between hospitals and visiting nurses. The social worker usually acts as a link between the doctor in the hospital and the nurse in the community, speakers stated. By this means the medical and social care of the patient is prolonged and extended into his home. The system is at present working fairly well, although there are a number of points at which its efficiency can be increased, it was declared. Furthermore, there seem to be some medical functions that the social workers cannot properly perform and that merit the attention of hospital administrators in order that cooperation between hospitals and public health nurses may be still further improved.

Under the efficient direction of Evelyn Phelps, Pacific branch, American Red Cross, a succession of pleasant social events was arranged. The outstanding activity was the Saturday afternoon drive to Palo Alto. Over the Skyline Boulevard a party of seventy-five delegates drove to Burlingame where several private gardens were inspected, then on to Palo Alto and Stanford University. After a supper at Stanford Union, President Hoover's home and other points of interest were visited.

In addition there were many other activities, partly recreational and partly instructive. The Children's Hospital entertained at a buffet luncheon followed by an inspection of the hospital. A tea was given at Berkeley Health Center and a luncheon was given by the California Association of Medical Social Workers.

Many workers from the East, and even from the more distant corners of California, enjoyed the Sunday excursion of the general conference to Mt. Tamalpais and Muir Woods. There was also an evening trip to Chinatown, culminating in a midnight visit to the Chinese Theater.

News of the Month

Roentgen Society Sets Time Limit for Film Storage

Two years is declared a sufficient length of time for the preservation of ordinary x-ray films after exposure in resolutions adopted recently by the Council of the Chicago Roentgen Society.

The resolutions follow:

WHEREAS the storage and preservation of used x-ray films has recently become an economic and insurance problem, and

WHEREAS the reports of the roentgenologists responsible for the diagnoses are of decidedly more value and importance than the films, and

WHEREAS these reports are filed with, and become a part of the records of each case, making it unnecessary that large numbers and quantities of old and used x-ray films be preserved and retained for long periods of time, it is therefore

RESOLVED by the Council of the Chicago Roentgen Society, acting officially for the Chicago Roentgen Society, that it is the sense and judgment of this society that it is not necessary to preserve any x-ray films for a longer period than two years after their exposure, and that in all cases where there is no likelihood of legal proceedings, such as ordinary clinical cases, medical conditions, gastro-intestinal and urinary tract examinations, it is deemed unnecessary to preserve or retain the x-ray films for a longer period than six months after their exposure.

This is, however, not in any way to be construed as discouraging the preservation of films of specially interesting or unsual conditions, as these are to be preserved because of their value for comparative study and for teaching purposes. And it is further

RESOLVED that referring physicians desiring to preserve the x-ray films of their own patients, be encouraged to do this, and it is hereby declared permissible and proper practice for roentgenologists to deliver the films to the referring physicians in such cases.

Record Librarians Complete Plans for Convention

Officials of the Association of Record Librarians of North America are completing arrangements for the annual session to be held in Chicago, October 14-18 in conjunction with the twelfth annual hospital standardization conference of the American College of Surgeons.

The record librarians of Chicago are making hospitable arrangements for the reception and entertainment of visiting members of the organization. Chairmen of convention committees have been appointed as follows: committee on arrangements, Mrs. Jessie W. Harned, president, Chicago and Cook County Record Librarians' Association; committee on credentials, Lois Baker, Presbyterian Hospital, Chicago; program committee, Jessie C. Longmuir, Chicago; committee on exhibit, Mrs. Emily Bufe, Michael Reese Hospital, Chicago.

Mrs. Clara A. Doolittle, president, Connecticut Hospital Historians' Association, is chairman of the nominating committee and with the other four members of her group is preparing the ballot for the annual election. The constitution and by-laws are ready for adoption and acceptance, action which will occupy primary attendance at the meeting and which will make the association an established organization.

Progress in Dietetic Work Recounted at Convention

Progress in the organization and administration of hospital dietary departments both in the United States and abroad was described in interesting manner by speakers participating in the meeting of the dietetic section of the American Hospital Association, June 20 at Atlantic City.

Dr. Joseph C. Doane, medical director, Jewish Hospital, Philadelphia, gave the first address, speaking on "What the Dietary Department Should Mean to a Hospital." Doctor Doane stressed especially the economic side of the dietetic problem, urging superintendents to watch the garbage pails as a means of determining whether or not the dietary department is being administered satisfactorily.

The economic issue also was discussed by Dr. Aladar von Soos, Royal Hungarian University Clinics, Budapest, Hungary, who spoke on "Organization of the Dietary Departments in the Large Hospital." In tracing the history of dietetic organization, Doctor von Soos told of experiments with centralized and decentralized kitchens and how finally the good points of both systems were adopted. Foods in his own organization, he said, are ordered on a unit cost basis. Each small unit is in charge of a dietitian who is given intensive training for three months under Doctor von Soos.

The visiting doctor spoke in German, his address being interpreted by Dr. P. W. Wipperman, Touro Infirmary, New Orleans.

Department problems from the dietitian's viewpoint were presented by Helen Gilson, dietitian, Pennsylvania Hospital, Philadelphia, who emphasized the need for facilities for work and for cooperation from other members of the hospital staff.

"If the dietetic department is to act as a therapeutic, educational, scientific and business service, it must have the cooperation of the administrative, medical and nursing departments," Miss Gilson declared.

Miss Gilson contrasted the prescriptions written for the pharmacist and the dietitian. There can be no substitution in the pharmacist's prescription. The dietitian's prescription must consider the wishes of the physician who prescribes the diet, the condition of the patient, his temperature, the surgical complication, whether he is in bed or ambulatory, the condition of the teeth, his personal likes and dislikes and idiosyncrasies, his economic status and whether the diet is to be house, modified house, soft or liquid. The calculations must be made to the fraction of a gram for each food group, she said, and where certain medication is given it must be carefully balanced.

A careful check of uneaten food must be made, and it must always be reweighed and recalculated before the diet is finally charted for the physician to compare with

News of the Month

the report of the chemist, according to Miss Gilson.

Sara Ann Cassell, principal, school of nursing, Montefiore Hospital, Pittsburgh, discussed special diets from the nurse's standpoint, urging especially that student nurses be given a thorough understanding of diet, and nutrition and the principles of cookery and their application to the many types of food. She also asked that nurses be given the opportunity of charting and comparing their own work with laboratory findings.

Sale of Inflammable X-Ray Films Banned in New York

Action taken by the Public Health Council of New York State at a meeting held June 26 will prohibit, after September 1, 1929, the sale or distribution of cellulose nitrate film for x-ray purposes. According to Dr. Matthias Nicoll, Jr., state commissioner of health, the action of the council has the effect of law in New York State outside of New York City. He also states that he has been officially informed by a representative of the fire department of that city that similar action will be taken there.

The following is the resolution adopted by the Public Health Council:

WHEREAS it is recommended to the Public Health Council by the special committee appointed by Acting Governor Lehman to investigate the hazard attendant upon the use of cellulose nitrate x-ray films in institutions in New York State, that the sale of such film be prohibited in New York State and

WHEREAS the use and subsequent storage of cellulose nitrate film in institutions caring for patients or other inmates constitutes a serious danger to health and life, therefore be it

RESOLVED that Chapter VII of the Sanitary Code be and is hereby amended by adding thereto a new regulation to be known as Regulation 17, to take effect September 1, 1929, and to read as follows:

The sale or distribution of cellulose nitrate film for x-ray purposes is hereby prohibited.

School Boards Provide Educational Facilities for Nurses

The boards of education in Providence, R. I., and Newark, N. J., are carrying on interesting experiments in educational work for nurses, according to information appearing in the July issue of the *Public Health Nurse*.

In Providence a class was conducted last winter at the Commercial Evening High School for twenty-three nurses who wished to obtain a certain number of high-school credits. The project method of teaching was used, the class following three designated units, one based on social service, one on national service and one on literature. The study included the development, government, art, literature and relationship of one country to another. Preparation of the notebooks by the students provided lessons in English, composition, spelling and punctuation.

The method of procedure on any given evening was first a seminar of about thirty minutes, at which problems of common interest were discussed. The group then would break up for research work in the library and the instructor would hold individual conferences with the nurses. The class met four evenings a week for two hours, from October 8 to April 25.

So successful was the class the past year, officials declare, that plans now are being made to continue the work the coming term.

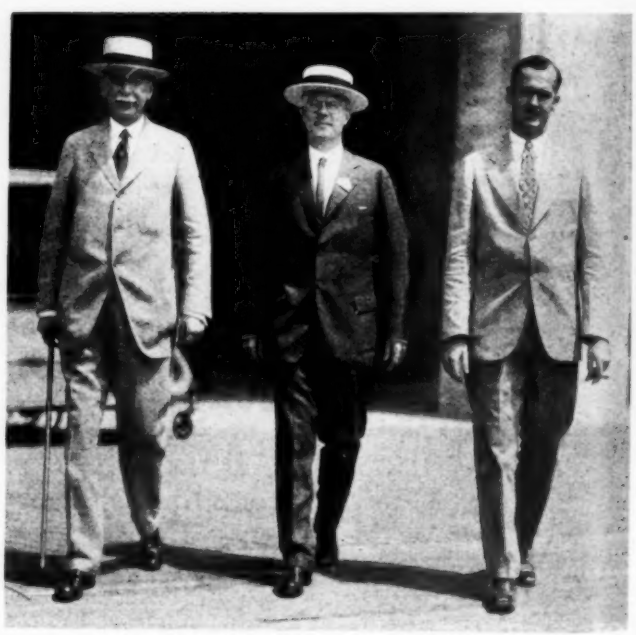
The department of medical inspection of the board of education in Newark established a class for school nurses enabling them to continue with their secondary education.

Classes were held Saturday mornings with instruction offered in English I and II, English III and IV, American history and modern European history. Next year a science course, probably biology, will be added.

Three "Generations" of Hospital Heads Hold Reunion

Three "generations" of hospital administrators made an interesting and interested trio at the June convention of the American Hospital Association at Atlantic City.

The three men, pictured here as they appeared on the board walk in the convention city, are Dr. Frederic A. Washburn, director, Massachusetts General Hospital, Boston; Dr. Louis H. Burlingham, superintendent, Barnes



Hospital, St. Louis, and retiring head of the American Hospital Association, and Dr. L. R. Wilson, superintendent, John Sealy Hospital, Galveston, Texas.

Doctor Washburn is dean of the trio. Under him Doctor Burlingham served an apprenticeship at Massachusetts General Hospital before going to the St. Louis institution. Doctor Wilson served his apprenticeship under Doctor Burlingham at Barnes Hospital before going to the Galveston hospital.

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Personals

NETTIE MCMILLAN, formerly superintendent of the Cedar Valley Hospital, Charles City, Iowa, is now superintendent of the Lockport City Hospital, Lockport, N. Y. MISS MCMILLAN was superintendent of the Lockport hospital once before, serving as its head for several years prior to 1918, when she went overseas as a Red Cross nurse in the war zone.

T. F. HAZEN, JR., has become superintendent of the Beverly Hills Sanatorium, Knoxville, Tenn.

JAMES DEPERINO is now superintendent of the Brooklyn Maternity Hospital, Brooklyn, N. Y.

ANGELINE R. O'LEARY has been appointed superintendent of the Forest Hills Hospital, Boston.

FRED J. LOASE has become superintendent of the Greenwich Hospital, Greenwich, Conn.

LOTTIE I. HERBERT, for seven years superintendent of Bethesda Hospital, Hornell, N. Y., has resigned her position.

DR. GLENN J. SMITH, Amite, La., recently was elected superintendent of the East Louisiana State Hospital for Insane, at Jackson. He succeeds DR. T. J. PERKINS.

DR. A. W. KARCH has become superintendent of the Monroe Hospital, Monroe, Mich.

DR. HENRY P. WALCOTT has resigned as president of Massachusetts General Hospital, Boston, and has been made honorary president of the hospital. DOCTOR WALCOTT is ninety-one years old. He was for more than twenty-five years president of the hospital.

W. P. SLOVER, formerly superintendent of the Burlington County General Hospital, Mount Holly, N. J., is now superintendent of the Greenville City Hospital, Greenville, S. C., where he succeeds T. R. W. WILSON, acting superintendent.

S. J. CONWAY has become superintendent of the Chicago Hospital, Chicago.

FRANCES SHOUSE is the new superintendent at St. Luke's Hospital, Eldorado, Kan.

EMMA M. LIPHARDT is superintendent of the Geneva General Hospital, Geneva, New York.

HILDORA J. BACH, R.N., who has been affiliated with hospitals in New York City and Los Angeles for the past four years, has become superintendent of the George B. Wright Memorial Hospital, Fergus Falls, Minn.

CLARA PANKNEN has become superintendent of the Mineral Springs Hospital and Sanitarium, Marengo, Iowa.

NELLE L. COCKERILL is the new superintendent of the Memorial Hospital, Norwalk, Ohio.

E. C. FITZGERALD has become superintendent of the Warren Hospital, Phillipsburg, N. J.

NETTIE NEWMAN, R.N., is now superintendent of the Rosabern Sanitarium, Omaha, Neb.

DORIS P. REED has become superintendent of the Boston Home for Incurables, Boston.

JOHN F. FINNEGAN has become superintendent of the Lawrence Municipal Hospital, Lawrence, Mass.

FRANK O. HOUCHARD is now superintendent of the Espiritu Santo Springs Sanitarium, Safety Harbor, Fla.

VICTORIA I. TOPOLSKI, R.N., is superintendent of the Henry and Catherine Hand Hospital, Shenandoah, Iowa.

LOUISA M. WALLIS, R.N., has become superintendent of the Union Hospital, Elkton, Md.

MRS. H. R. HILLMAN, R.N., is superintendent of the Goodland Methodist Hospital, Goodland, Kan.

GERTRUDE D. STAPLETON, R.N., is superintendent of the Cambridge City Hospital, Cambridge, Mass.

OWEN W. PARKER has become superintendent of the Contagious Hospital, Ely, Minn.

DR. EUGENE A. SCHARFF has resigned as superintendent of the City Hospital, St. Louis, effective June 15. DOCTOR SCHARFF expects to continue in hospital administrative work in another city.

EDITH MAY HARTSUCK has become superintendent of Ottumwa Hospital, Ottumwa, Iowa.

NOAILES D. HAYES is the new superintendent of the William S. Major Memorial Hospital, Shelbyville, Ind.

M. J. RODVOLD, R.N., is now superintendent of Priest River Hospital, Priest River, Ida.

L. J. HAVEN, R.N., has become superintendent of Whidden Memorial Hospital, Everett, Mass.

DR. J. R. CLEMONS, organizer and president of the Georgia Hospital Association, has resigned as superintendent of Macon Hospital, Macon, Ga., in order to do postgraduate work in an eastern college during the coming year. DR. RHEA W. RICHARDSON, roentgenologist at Macon Hospital for the past four years, has assumed the duties of superintendent. He will also continue in the capacity of roentgenologist.

DR. EDWARD LIEURANCE has been appointed assistant superintendent of the Montana State Hospital for the Insane at Warmspring, Mont., by Gov. J. E. ERICKSON. His appointment is for four years.

FAYE GEE has been named superintendent of the Goshen General Hospital, Goshen, Ind., succeeding DINAH HOSSEY, who has resigned to be married.

MRS. LUELLA M. HUBLEY, formerly of Chicago, has been selected as superintendent of the Jay County Hospital, Portland, Ind. MISS BERNICE WYSONG, who has been acting as temporary superintendent, will remain as a nurse.

ANNA FRANCES COON, for many years superintendent of the Cohoes Hospital, Troy, N. Y., died June 4 following a long illness. She began her duties as superintendent of the Cohoes hospital in 1912.

JOSEPH F. MILLER, superintendent of the Methodist Hospital, Peoria, Ill., for five years, has been named superintendent of the Jefferson Davis Hospital at Houston, Tex.

REPORT

OF

"An Experimental Study of the Use of UNSWEETENED EVAPORATED MILK for the preparation of Infant Feeding Formulas"*

by McKIM MARRIOTT, M. D.
and LUDWIG SCHOENTHAL, Dr. Med.

*From the Department of Pediatrics, Washington University School of Medicine, and St. Louis Children's Hospital

Reprint from The Archives of Pediatrics

"The Curd and the Buffer in Infant Feeding"

JOSEPH BRENNEMANN, M. D.
Children's Memorial Hospital, Chicago, Ill.

Summary of Article in
The Journal of The American Medical Association

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News of the Month

Social Workers From All Parts of Country Attend Convention

THE convention meetings of the social service section of the American Hospital Association at Atlantic City, June 17 to 21, were well attended by social workers and superintendents. One hundred and fifty-four social workers from sixteen states and the District of Columbia registered. All parts of the country were represented, with delegates present from Pennsylvania, Indiana, New York, Iowa, Delaware, Ohio, Illinois, Minnesota, Michigan, Massachusetts, Virginia, New Jersey, Connecticut, Missouri and Rhode Island.

The opening session of the section was a joint meeting with the American Hospital Association. Dr. C. G. Parnall, director, Rochester General Hospital, Rochester, N. Y., and president-elect of the American Hospital Association, opened the meeting. In welcoming the delegates to the conference he spoke of the progress of the social service movement and emphasized the growing recognition of its importance in the hospital as a functioning unit.

The first paper, "Hospital Social Service for People of Moderate Means," was read by Ora Mabelle Lewis, supervisor of social service, Massachusetts General Hospital, Boston. Miss Lewis said in part:

Service Comparatively Young

"Organized hospital social service in this country is about to enter its twenty-fifth year. It is very young as compared with the practice of medicine or the study of sociology, yet old enough to have already attached unto itself many misconceptions as well as some which have been thrust upon it.

"Probably one of the greatest of these is the seemingly preconceived idea that hospital social service has chiefly to do with people who are economically poor, although not necessarily spiritually so. And this is quite a natural and logical assumption on the part of anyone who is not familiar with the more recent developments in hospital social service, or in other lines of social service work. In reviewing the history of social service work we realize that for many years the only social work, known as such, was carried on by 'charity' organizations which gave material relief. We appreciate how far we have advanced from those early conceptions.

"We should take into consideration the well recognized fact that in social as well as medical fields, adequate facilities are available only for care of the very rich and the very poor. That leaves the great middle class, which is not rich enough to buy the best service and not poor enough to accept charity. These are the people who need social service, a great number of individuals who can pay for some things, but not for everything all of the time."

In the discussion that followed, Katherine E. Wakefield, Johns Hopkins Hospital, Baltimore, stated that the emphasis of the medical social service department at Johns Hopkins Hospital has been placed on the treatment for free patients, although through the admission office, house dispensary and Harriet Lane Home, channels are opening for work with patients of moderate means.

The second paper, "The Social Worker Looks at the Hospital Superintendent," was read by Mary K. Taylor, Presbyterian Hospital, New York City.

"Much discussion is given by hospital superintendents to standardization," Miss Taylor said. "This standardization, however, cannot be too thorough. Inequality is recognized when the question of assessing and collecting fees is discussed. This cannot be reduced to a standard or formula. Here the social worker's point of view can be of use to the hospital superintendent, for the underlying principal of the social worker's task is attention to the unequal. By trying to see the hospital through the eyes of the patient, and by the appreciation of the importance of the patient, may be built many standards. Each patient is a human being of utmost importance to himself and to those who love him. Too few steps are taken to protect the patient from confusion, delay and brusqueness."

In opening the discussion following, Dr. Phillip S. Platt, Associated Out-Patient Clinics of the New York Tuberculosis Association, brought out the fact that the individual need is paramount. Hospital superintendents and social workers are as if lost in the woods in the face of all the things expected of them, he said.

Dr. Michael M. Davis, Julius Rosenwald Foundation, Chicago, brought out the difficulties a hospital superintendent must face in keeping the income up and the expenses down and showed how, because of being confined to his desk, he is often isolated from the direct result. The hospital atmosphere, standardized as it may be, is still much more sympathetic than the average business concern and this is an encouraging feature, Doctor Davis declared.

Rabbi Fineshriber Gives Address

The section dinner was held at the Chelsea Hotel and was attended by nearly every hospital social worker registered. Rabbi William H. Fineshriber, D.D., Keneseth Israel Synagogue, Philadelphia, gave the address on "Ideals of Service." He stated that it is often difficult to keep in mind the things one is supposed to do, to maintain ideals and to concentrate on a goal. These difficulties are encountered by physicians, ministers and other professional people whose minds are so thoroughly occupied by the tasks of the day, he declared. "The ideals of human life years ago have not changed in content, though they may vary in different countries and the emphasis may be placed on different things," Doctor Fineshriber said. "Underlying all is the old Hebraic adage 'What is hateful to thyself do not unto thy neighbor.' We should revivify these old ideals."

The section held three joint meetings with the teaching hospital section, the out-patient section and the small hospital section.

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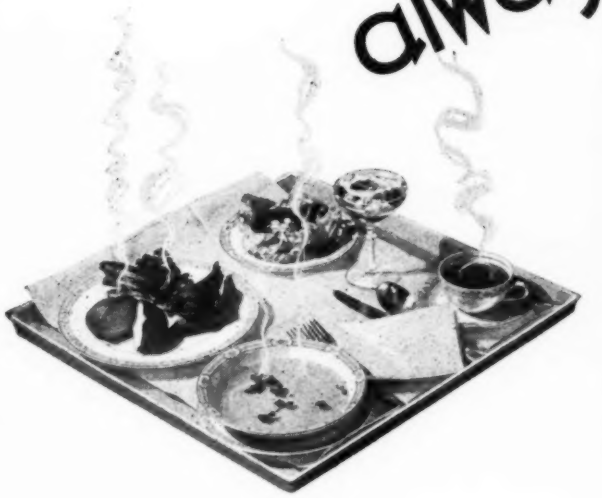

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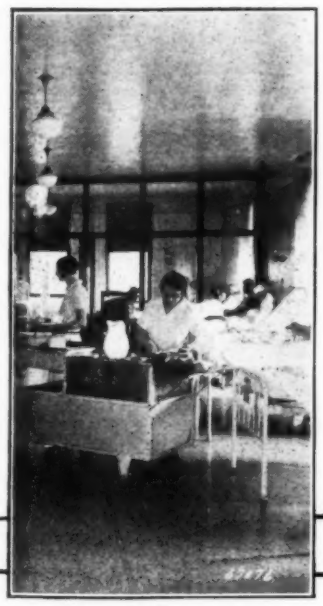

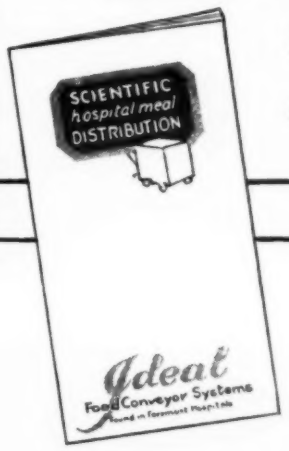

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News of the Month

At the joint teaching hospital section meeting Marian Bond, Johns Hopkins Hospital, read a paper for Grace Ferguson, Washington University, St. Louis, on "The Teaching Hospital's Part in the Training of Medical Social Workers."

In pointing out the teaching hospital's responsibility for the training of hospital social workers Miss Ferguson stated:

"Is not the hospital the logical place in which to train any person whose objective is to assist the sick back to health?

"While the student social worker brings to the hospital certain knowledge of social problems, possible means of their solution, an understanding of the interrelationship between the individual and his social environment, what contribution can she make to the practice of medicine in hospitals? What further training does she need? Can the teaching hospital play a part in this training?

"Teaching hospitals are fitted to participate in three phases of such a program, first, in giving field practice, second, in providing formal instruction in medical subjects for social workers and third, in presenting the opportunity to participate in medical social research.

"Broadly speaking, the major functions of the hospital social worker are: the process of making inquiry into the social situation of patients and the reporting of findings to the physician; determining, in collaboration with the physician, the factors in the social situation pertinent to the patients' health, and setting up, with the physician, a best estate for the patient."

At the joint out-patient section meeting Elizabeth Rice, Boston Dispensary, Boston, spoke on: "What Is the Responsibility of the Hospital Social Worker in Determining Dispensary Fee?"

Her paper outlined the principles that should be adopted as the basis for determining a patient's ability to pay for medical care. The responsibility of an institution to patients wishing clinical service is threefold, she said, first, to the physicians who are giving their services to the hospital, second, to the community which raises the money for the hospital, and finally, to the patient who is accepting public care when he is financially able to provide adequate medical care for himself.

Interviewing for a Financial History

Miss Rice declared that a financial history with any degree of accuracy can be obtained only when it is taken as a part of the patient's general scheme of life, and that this data might later be used for the nucleus of the social case history. The patient should be considered as an individual in all his outside relationships, his family, work, racial background, economic status and medical complaints. Comparison of income and expenditures of the patient or his family with a standard budget should be made in relation to the medical care required.

At the joint session with the small hospital section Gladys Thomas, Bryn Mawr Hospital, Bryn Mawr, Pa., in discussing "How Social Service Aids in Solving Some Problems of the Small Hospital," said:

"Social workers have the same contribution to make in large as in small hospitals. Through investigation and study of the patient's personality and environment, social workers make their real contribution.

"The first problem of a small hospital is the lack of sufficient beds. In the dispensary the social workers interpret the doctor's orders to the patient, arrange for transportation to clinics, refer cases to the visiting nurse society and plan for convalescent care, often keeping the patient from requiring hospital care. When the beds of the hospital are filled the social worker can refer patients needing hospital care to other institutions and also see that the beds are not occupied by chronic cases."

Two round table meetings were held. At the first, the hospital's responsibility for giving medical information to qualified persons and agencies was discussed by Theodate Soule, director of social work, Springfield Hospital, Springfield, Mass.

"The hospitals," she declared, "have a definite responsibility to the community in giving information to agencies. As social service departments and the administrative offices are the usual sources of information, it is necessary that they agree in regard to giving information to outside agencies.

Written Reports Advised

"The general policy that has been followed is that the social service department gives information only when the patient is known to the department. If the patient is not known, the information is given by the administrative office. This protects the social service department. It should only be supplied in the form of written reports."

"What Contribution Can Psychiatric Social Work Make to Medical Diagnosis and Treatment?" was the subject of the second round table. Nancy Johnston, Washington University School of Medicine, St. Louis, showed that psychiatry is demanding that more attention be paid to social needs in the field of medicine, and further that the social worker in her treatment should emphasize the mental and emotional factors that enter in and are sometimes the predominating cause of the patient's symptoms.

"Phychiatric social work is now functioning in schools, industries, courts and correctional institutions. Formerly it was thought that its place was only in mental hospitals and special clinics," stated Miss Johnston. "In the busy clinics of the larger hospitals it has been clearly demonstrated that the emotional and mental reactions of the patient who appears to be physically ill must be considered, just as the physician of mentally ill persons sees the need of physical findings in his treatment of those that come to his attention."

Miss Moore, Institute for Child Guidance, New York City, in continuing the discussion, stressed the value of such service in a general hospital and described the aid it is to the physician in his diagnosis and treatment. The growth of psychiatric clinics in general hospitals has been slow and these clinics are not uniformly organized at the present time. The duties of the psychiatric social worker vary in different clinics. Outside agencies have to some extent stimulated the establishment of such clinics.

The section held a general meeting at which committee and district reports and the reports of the executive and educational secretary were read.

Mrs. Henry Bain, Jr., Philadelphia, a member of the board of managers of the Seashore House for Invalid Children, entertained the visiting social workers and their friends at tea at the Hotel Chelsea.

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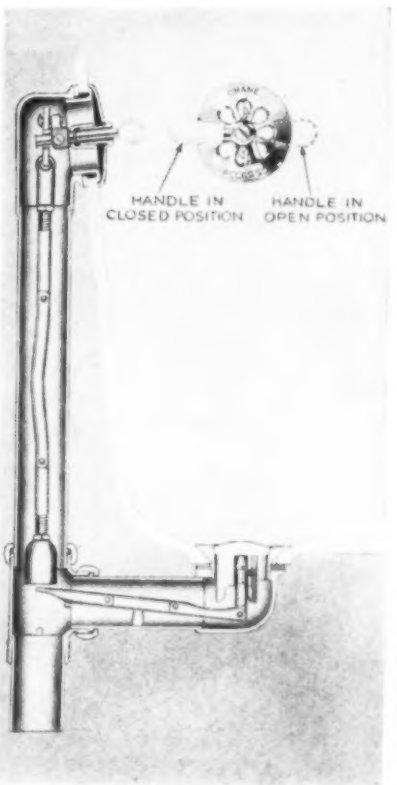

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News of the Month

Plans for New Connecticut Hospital Completed

Plans for a new seven-story hospital building have been completed by directors of the Charlotte Hungerford Hospital, Torrington, Conn., and construction will start within a short time.

The first floor of the new building will be given over entirely to administration and the clinical service. On the ground floor is to be a complete physiotherapy department, and in the southern wing will be a huge daylight kitchen.

Successor to Doctor Brodrick Is Appointed

Dr. Ralph B. Seem, superintendent, Billings Memorial Hospital, Chicago, has been appointed superintendent of the Stanford University Hospital, San Francisco, to fill the vacancy caused by the death of Dr. R. G. Brodrick, according to announcement from the office of the dean of the Stanford University School of Medicine. Doctor Seem will begin his new duties September 1.

From 1912 to 1920 Doctor Seem was assistant superintendent of Johns Hopkins Hospital, Baltimore, after which time he came to Chicago as consultant on the plans of the Albert Merritt Billings Hospital. He was released in 1921 to go to China to superintend the organization and opening of the Peking Union Medical College Hospital and in 1923 he returned to Chicago and when the Albert Merritt Billings Hospital was completed and opened in 1926 he became superintendent of the institution.

Patients Suffering From "Nerves" Treated at Edinburgh

The Royal Hospital, Edinburgh, Scotland, has established a hospital for the treatment of patients suffering from "nerves," according to announcement in a recent issue of the *Bulletin of the American Hospital Association.*

The new clinic will help educational authorities in the solution of many problems connected with various types of child behavior, including precocious as well as backward children. Judicial authorities also are expected to use the clinic in case of juvenile delinquents, especially first offenders.

Lying-in Hospital to Become Part of New York Medical Center

Within two years Lying-in Hospital, New York City, will merge with the New York Hospital, becoming part of the medical center projected last Fall by the union of the New York Hospital and Cornell Medical College, according to recent announcement in the *Bulletin of the American Hospital Association.*

The Lying-in Hospital will move from its present quarters to a new building overlooking the East River, a structure that will be a memorial to the late Laura Spelman Rockefeller, mother of John D. Rockefeller, Jr., who has given $2,000,000 for its construction. J. Pierpont Morgan also has given $2,000,000 for the new building and George F. Baker has offered a benefaction of $1,000,000.

The new Lying-in Hospital will have 160 beds for obstetrics and gynecological cases. The Pediatric Hospital, with 150 beds for children, will adjoin it.

Graduate work for practicing physicians and the special training of nurses in the care of maternity cases, will be continued under the new arrangement.

The corporate name and existence of Lying-in Hospital will be retained but the board of governors has been reorganized to include the governors of the New York Hospital.

Michigan Appropriates Huge Sum for Building

Building operations to carry out the provisions of the Hartman bill, recently passed by the Michigan legislature and appropriating more than $27,000,000 over a four-year period for the rehabilitation of state hospitals and institutions will be under way within a short time, it has been announced.

The most extensive building operations this year will be carried on at the Michigan Home and Training School for the feeble minded at Lapeer, for which an appropriation of $1,000,000 for this year and $600,000 for next year, was made. Other work to be started this year includes an expenditure of $300,000 at the Kalamazoo State Hospital, $350,000 at Pontiac State Hospital, $430,000 at the Traverse City Hospital, and $1,500,000 for a new state hospital for which the site has not yet been selected. Pending construction of this new institution the Pontiac Hospital is to be placed in a usable condition, after which it will be abandoned.

The other funds appropriated by the legislature will be used for the construction and remodeling of state educational institutions.

Break Ground for New Hospital Wing at Canton

Ground-breaking ceremonies for the new $350,000 wing to Mercy Hospital, Canton, Ohio, attracted a large attendance recently. The wing is to be constructed where now stands the home made famous by President William McKinley during his "front porch" campaign. Part of the hospital program was presented from this porch.

Msgr. C. Treiber, with the assistance of Canton and visiting clergy, broke the ground with a gilded spade, and Rev. Fr. E. P. Graham, pastor of St. John's Catholic Church, presented the address of the afternoon.

As soon as the McKinley home is moved from the site work on the new structure will be started.

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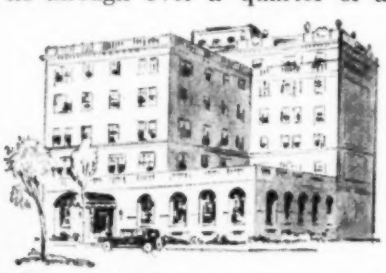

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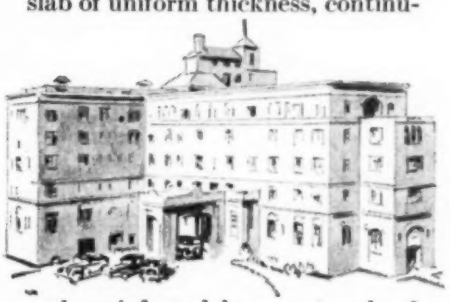

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News of the Month

University Hospitals of Cleveland Form New Medical Center

The University Hospitals of Cleveland, first planned fifteen years ago, soon will take their place among the notable medical centers in the country.

Several units in the group, including the Maternity Hospital, Babies' and Children's Dispensary Hospital of Cleveland, the Western Reserve School of Medicine, and the Pathological Building, already are completed and in operation, although the Pathological Building will not be dedicated until October.

Others of the group, including the new Lakeside Hospital, the nurses' dormitory and the Leonard C. Hanna pavilion, now are under construction and are expected to be ready for occupancy in October, 1930. Two additional buildings, the staff house and a nurses' recreational center, are planned for early construction.

The entire group, known as the University Hospitals of Cleveland, will be managed by a board of trustees elected by the boards of the individual hospitals represented and the board of Western Reserve University. The hospitals are privately owned.

National Cancer Clinic Is Established

With the establishment of a cancer clinic in the Cook County Hospital, scheduled to start operation August 1, Chicago has become the center of the national battle against the disease.

The clinic, made possible through appropriations by the Cook County Board, is headed by Dr. William A. Hendricks, formerly of the staff of the Mayo Clinic, Rochester, Minn., and now with the Wesley Memorial Hospital, Chicago. Doctor Hendricks has just completed a tour of study in preparation for his work in cancer research and treatment.

Plans for the clinic were suggested by a committee of citizens named by the county board. The forty cancer patients now in the Cook County Hospital will be placed in two wards, one for women and the other for men. The reactions of these patients will be carefully observed by Doctor Hendricks and by representatives of Chicago's four medical schools—Illinois, Chicago, Northwestern and Loyola universities—and by the staff of the Cook County Hospital.

These patients, it is made clear, will not be subjected to unsound experimentation. New forms of treatment will not be employed until they have been proved valuable in the hospital laboratory and in the laboratory of Coroner Herman N. Bundesen, who assisted in the establishment of the clinic. The procedure at first will include scientific observation of cancer cases, the making of recommendations and the compilation of statistics.

It is announced that the clinic will avail itself of the records of the American College of Surgeons, which began compilation of facts of every known case of cancer in the United States and Canada early this year and which has made Chicago the center of information and of the dissemination of literature concerning cancer.

National Refrigerant Code Proposed

Deaths and illness alleged to have resulted from gas leaks from automatic refrigerators in Chicago recently prompted Dr. Arnold H. Kegel, health commissioner of that city, to order an investigation into the use of gases in artificial refrigerators, to determine the best means of safeguarding the public from illness and fatalities from leakages and also to determine whether methyl chloride, which a coroner's jury found to have caused the death of a Chicago woman, twenty-eight years of age, should be prohibited from use in refrigerators unless mixed with an odorous gas which would disclose leakages.

This investigation was followed by a conference between the officials of the health department and the representatives of the mechanical refrigeration industry of America when efforts were made to draft an ordinance that may become a national code for the regulation of iceless "ice boxes."

Approximately 150 manufacturers, chemists, engineers and dealers were present, representing the makers and distributors of mechanical refrigerators in all parts of the country. Former State Senator Thurlow G. Essington, the spokesman for the industry, urged the aldermen to give consideration to the ordinance presented by the industry since it represented the results of studies by twenty-eight prominent research organizations, including the United States Department of Labor and Bureau of Standards, the American Institute of Refrigeration and the National Bureau of Casualty and Surety Underwriters. "The unanimous engineering and chemical opinion," he said, "is that there is no cause for any alarm in connection with the use of mechanical refrigeration, any more than there is in the cases of other chemicals and gases to which we are exposed constantly in normal life, the hazards of which far exceed those attributed to mechanical refrigeration. With the proper installation of these refrigerators, the public has no cause for uneasiness."

Nurses' Home Formally Presented to Hospital

Formal presentation of the $400,000 Moses Shoenberg Memorial Nurses' Home was made to the Jewish Hospital, St. Louis, by Mrs. Dollie D. Shoenberg and her son, Col. Sydney M. Schoenberg, at a dedicatory service held recently in the gymnasium of the new structure.

The building, which was erected in memory of the late Moses Shoenberg, pioneer merchant of St. Louis, was accepted on the part of the Jewish Hospital by Aaron Waldheim, president of the board. The new structure, seven stories in height, is on South Kingshighway, just south of the Jewish Hospital with which it is connected by a tunnel.

The school of nursing at the Jewish Hospital has grown from an enrollment of twenty-six students three years ago to ninety-four at present, and with the enlarged accommodations afforded by the new building, a capacity enrollment is predicted within a short time.

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NURSING AND THE HOSPITAL

Conducted by M. HELENA MC MILLAN, R. N.,
Director, School of Nursing, Presbyterian Hospital, Chicago

Preparing the Nurse for Service in the Public Health Field

By KATHARINE TUCKER, R.N.
General Director, National Organization for Public Health Nursing, Inc., New York City

ONE fact should be made clear in discussing the preparation that schools of nursing should give for future work in the public health field: The basic preparation of public health nurses should be the same as that required to prepare all nurses for their future opportunities and responsibilities.

This subject, however, will be discussed here from the viewpoint of a public health nurse. At the same time the essential inclusiveness of the problem and the lack of differentiation that is now emphasized will be recognized. In this connection, it may be well to note that a question that is by no means settled is whether there may not be room also for schools of public health nursing that offer a three-year course, built on a foundation of at least two years of college, leading to a bachelor's degree and preparing specifically for the public health field. The general trend, however, does not seem to be in this direction in view of the increasing emphasis that is being laid on the opportunity that all nurses have to participate in the movement for individual, family and community health.

National League Curriculum Praised

In 1927 the National League of Nursing Education published the revised edition of "A Curriculum for Nursing Schools." So completely does this volume aim to prepare for health nursing as well as for sick nursing and so satisfactorily does it show how this can be done, that any statement of the desirable preparation that schools of nursing should give as a groundwork for public health nursing can be little more than a recapitulation of the point of view and of the recommendations contained in the book.

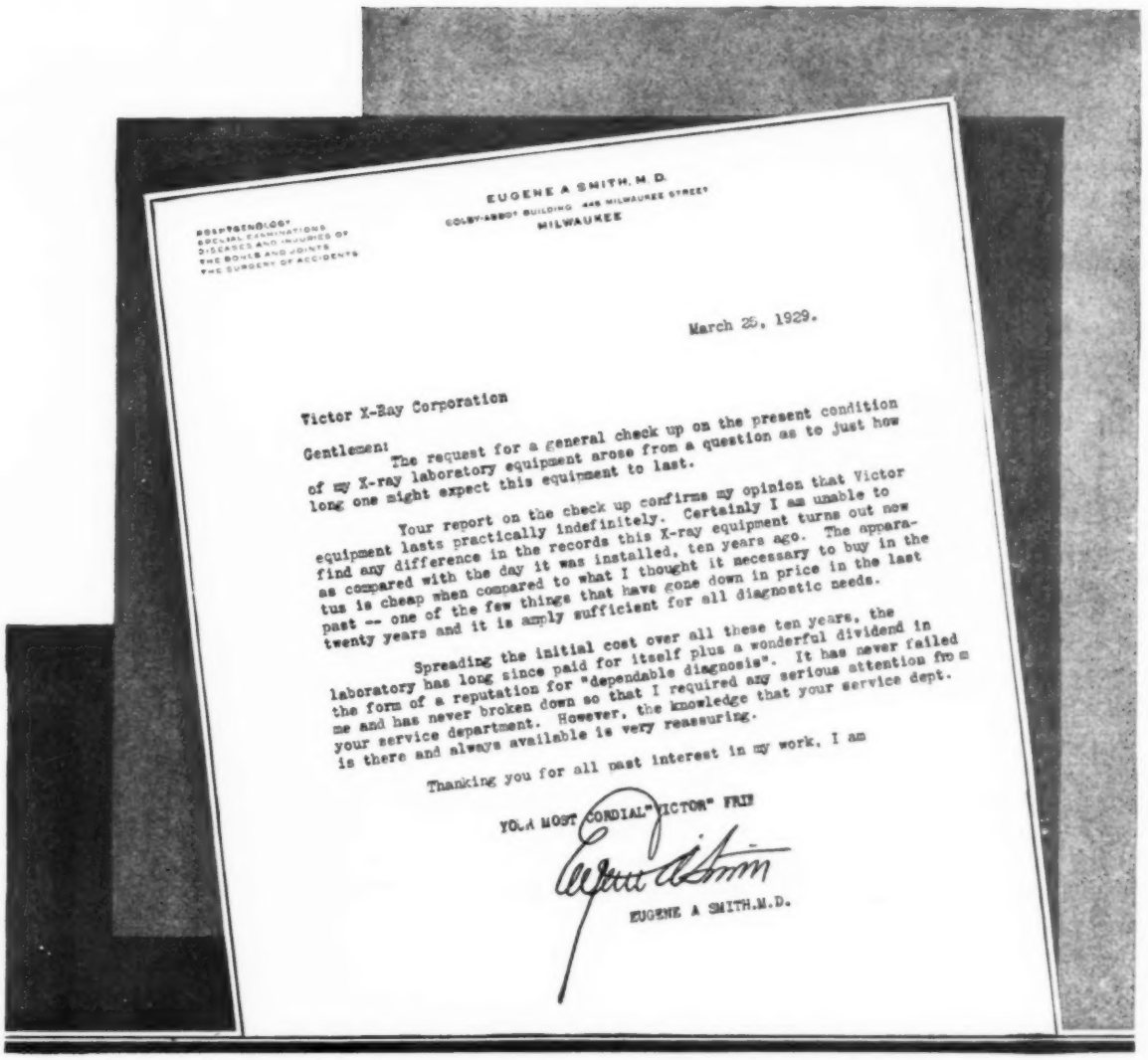
In considering the preparation desirable for any special field, it is generally recognized that the only scientific approach is by a definition and preferably a job analysis of the field itself. No satisfactory definitions of public health nursing have been produced, and a thoroughly scientific job analysis is yet to be undertaken. In presenting this article, however, a definition recently evolved from a general discussion of several public groups will serve: "Public health nursing is an organized, non-profit community service rendered by graduate nurses to the individual, the family and the community. This service includes the interpretation and application of medical, sanitary and social procedures for the correction of defects, the prevention of disease and the promotion of health, and may include the skilled care of the sick in their homes." In addition, there is the three-fold function of the public health nurse that has been repeated so often, so glibly and so automatically that it has almost ceased to have real meaning: "To assist in getting the sick well, in preventing sickness and in promoting health."

Nurse Part of General Health Movement

Inadequate though such statements may be, they make apparent several aspects of the program of the public health nurse. She is merely one factor in the community social and health program. Hers is not an isolated undertaking but is one indissolubly related to the medical profession, to health officers, teachers, social workers and all health and social institutions and movements. It calls for an ability to think in terms of community organization, community education and community participation. The public health nurse must be prepared to meet all kinds of conditions and make all kinds of adjustments with a view to playing her part in making health available to the members of the commnuity in which she works.

With this brief outline of some of the things expected of the public health nurse, we shall turn to the question of her basic preparation in schools of nursing. It seems unnecessary to dwell on the fact that she should have the skills and knowledge that are generally accepted as essential for any well equipped nurse. What are the particular skills and knowledge that are important for the public health nurse, always recalling that we are making this seeming distinction simply to meet the subject assigned?

Throughout the course, it is desired that the nurse's education shall be directed toward the whole patient, not just as the focus point of certain diseased organs but as a human being with mental, emotional and social sides that have direct relationship to his physical condition, its



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causes and his chances of recovery. The patient is a member of a family and that family is part of an environment, all of which must be considered in studying the causative factors and their bearing on the patient's health. Health teaching and health protection need to be considered in immediate juxtaposition with the study of disease and the care of the sick, if the nurse is to have a sound basis for her rôle as health teacher.

There are certain qualifications of personality and ability that are also a necessary part of the equipment of the public health nurse. It is important that, since she is being professionally prepared, these characteristics be given scope for expression and development. Imagination, resourcefulness and initiative are called upon every day in the work of the staff nurse and the chief executive. A scientific attitude of mind, which makes one always the student and the experimenter, a willingness to cast off old ways for new, a teaching ability that comes from the power to understand and meet others from their starting point and to think along with them—all of these qualities of mind and spirit need cultivation for a field that is constantly developing and changing as science and experience contribute to our knowledge of better and sounder ways. Also in an undertaking so cooperative as public health, where success depends upon the development of productive relationships between all professional groups, there is little place for the pure individualist but great need for the creative thinker and pioneer worker.

Certain particular phases of health work are receiving increasing emphasis in the public health movement, for which it must turn to schools of nursing for a corresponding emphasis and foundation in the nurse's preparation. So generally is it recognized that a theoretical background and direct experience are needed in these subjects that little more than an enumeration is necessary.

Complete Maternity Course Advised

Since the foundation for a healthy life is laid during the prenatal period and the weeks following, it is essential that student nurses be given a complete maternity service. Included in the pediatric service should be contact with the normal child and opportunity to observe various developmental processes, as well as experience in the various diseases of childhood. Orthopedics and the preventive phases in posture work are too little emphasized in health programs, and nurses in the public health field are not equipped at present to meet the opportunities presented to them.

The more inclusive the service in communicable diseases is, the better will be the public health nurse. The knowledge of the cause, prevention and actual care of the so-called contagious group and tuberculosis and venereal diseases should be part of the equipment of every nurse taking part in health work.

In recent years mental hygiene has revolutionized our understanding of the whole range of human problems and the approaches to their solution. No group has a better opportunity to apply this knowledge than public health nurses. A background of normal and abnormal psychology and an understanding of the relationship between mental and physical health and diseases are necessary. Some experience with mental cases is a great asset, but any hospital ward gives ample opportunity for putting into practice the principles of mental hygiene.

Nutrition is now considered one of the most important factors in health. It is therefore not enough for the nurse to know the relationship between diet and sickness. She needs the knowledge of the relationship between nutrition and health throughout the different age groups, with some conception of the social factors affecting it, such as family budget, racial prejudices and social conditions.

It can be assumed that strong courses in physiology and personal hygiene are desired. Some knowledge of public health—the scientific facts upon which control and prevention of disease are based—should be given during the basic course. This should include sanitation, housing, health regulations and community protective measures.

That the nurse may see her place as part of the whole movement of prevention and health promotion and have some idea of all the forces that are brought to bear in this warfare to stamp out disease, a survey of modern social and health movements is important. As an intelligent responsible citizen the nurse should have this knowledge. As a potential public health nurse, she should early get the picture as a whole so that she may never lose sight of the fact that the movement is infinitely bigger than any one professional group and must depend for its success on a productive working relation between all groups concerned.

Summary of Objectives Presented

As a summary of these suggestions as to certain emphases in content of the course, the objectives can be stated as follows: It is desired that the nurse should have before her as her goal, individual health both of mind and body for each member of a social group. Therefore some knowledge of the normal is important. In studying the individual as a sick person, she should have experience in different stages of the disease and should always consider cause and prevention as well as treatment. She should know early symptoms and the importance of convalescence and she should be interested in acute stages as well. She should approach her problem as a teacher and as a technician.

So that these objectives may be realized, certain enlargements and developments within the nursing curriculum are necessary. Some provision for direct contact with social and community conditions that are the background of the patients in the hospital wards is desirable. This may be obtained early through trips of observation. Later, case studies that include all of the factors that may have brought the patient to the hospital ward and will affect his health on his return to his home do much to make it possible for the nurse to see the whole person. Experience in out-patient departments under supervisors experienced in health work, and affiliation with public health nursing agencies during the senior year contribute concretely to the realization of these objectives.

The foregoing is not just theoretical or visionary. Many schools of nursing throughout the country are giving in part or entirely this kind of education, which makes possible advanced work later in the public health field. It is only desired that the school of nursing give the foundation on which to build the specialty. Also it seems but fair to expect the basic education for any profession to give a broad enough experience to serve as a vocational guide to those who are uncertain as to which particular line they wish to choose for their endeavors.

It cannot be too often reiterated that increasingly is it being realized that there are need and opportunity for the application of all this knowledge and skill in every phase of the practice of nursing.

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DIETETICS AND INSTITUTIONAL FOOD SERVICE

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The Trained Dietitian Is An Asset to Every Hospital

By ELIZABETH HAYWARD
Formerly Dietitian, White Memorial and Methodist Hospital, Los Angeles, Calif.

"WHERE can we get a capable director of dietetics?" How often is this question asked by hospital superintendents, and how often is it necessary to answer it by calling attention to the need for training dietitians to fill such positions.

In every hospital there is a place for a properly trained dietitian. Every hospital needs an efficient dietary department and this department should have as its head a capable dietitian. Many hospitals feel that they cannot afford to be without the services of a dietitian since diet therapy is coming to assume so prominent a place in the prevention and cure of disease.

Administrative Dietitians Needed

Capable administrative dietitians are among the greatest wants of the hospital world to-day. The dietitian who is called to head one of the most important departments of the hospital organization is one who can successfully control the entire food service to patients and personnel of the hospital, who can supervise diet therapy treatments ordered by the doctors and who can successfully teach nutrition and dietetics to pupil nurses and student dietitians. Special training is necessary, however, before a dietitian can fill such a position and the hospital is the only place she can get that training.

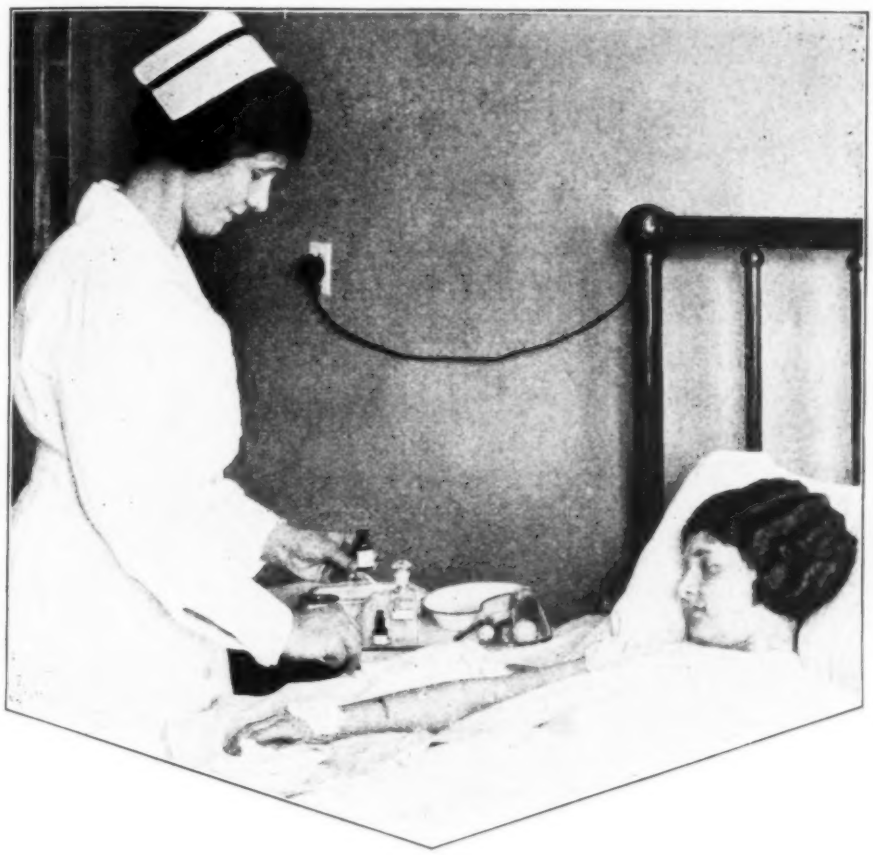
Every hospital that has a dietitian has a head dietitian or director of dietetics. Whether she has one or more assistants will depend upon the organization and size of the hospital. This head dietitian is responsible to the superintendent of the hospital for complete control of the hospital food service. The dietitian who is responsible to the superintendent of nurses will not be considered here. Since hospital authorities have recognized the inconsistency of this organization, only a few hospitals now have such an arrangement.

Having complete control of the hospital food service means the purchasing, preparing and serving of all food to patients and hospital personnel. Many dietitians do their own buying, some buy only produce and meats and others are not allowed to have any contact with food markets. In all cases, whether she orders directly or merely places her order with the superintendent or buyer, she says what and how much she wants. To do this she must know market conditions and foods in season. Contact with salesmen often would be greatly to her advantage in menu planning.

Control over food preparation means the supervision of the main kitchen and all places where food is prepared. The dietary departments of the West Coast that are considered the best are the ones with this organization, but in investigating the organization of these departments it will be found that the head dietitians realize that the task of handling small details in the kitchen is great and unnecessary. They are wise department heads who delegate to the chef and other trained and dependable employees authority to take care of routine matters. By doing this they relieve themselves of many unnecessary details and at the same time cater to the natural desire of chefs for authority and freedom in the kitchen. The employees, however, know that the dietitian is in complete charge of the department and that her request is law. Why should hospital superintendents feel that if the soup is too salty they should see the chef? Can one imagine the manager of a well organized hotel seeing the chef every time he receives a complaint? In most cases a steward is the go-between. He is the one that handles the food service to hotel guests. In the hospital the dietitian should be responsible to the superintendent in the same way the steward is responsible to the hotel manager.

Superintendents Dubious as to Ability

Hospital superintendents say that it has not yet been proved to them that dietitians can do buying and executive work. Since women are doing it in other institutions, why should they be excluded from the hospitals? Women are managing hotels and are running successfully restaurants and tea rooms. A woman can competently supervise food departments and food service if she is properly trained and if she has had the necessary experience and the right kind of help. The point of emphasis in this paper is the proper training and experience of the dietitian. Where can an ambitious girl get the necessary hospital training and experience to make her capable to do what she is often asked to do in the hospital?



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The dietitian, besides being responsible to the hospital superintendent for all food administrative problems, is responsible to the staff doctor for carrying out diet therapy orders. She must cater to the eccentric appetite of every patient brought into the hospital. This is a great responsibility and is one of her most important duties. Studying each case to get the best results and teaching the patient the principles of his individual diet that he may continue it when he leaves the hospital take time and demand the best there is in a capable dietitian. The dietitian is also responsible for nutrition and dietetic instruction to student nurses and for the practical diet kitchen training.

The dietitian is really responsible to the hospital superintendent, the hospital staff and the superintendent of nurses. This does not mean that she has three superior officers but that in her actual work she must meet the requirements of and work with the staff men and nursing department as well as with the hospital superintendent and all the other department heads.

Before the hospital can find such a dietitian she must be trained, and this brings us to the cardinal point of this discussion—the hospital's responsibility in training the student dietitian.

Dietitians as Department Heads

There is a place in every hospital for the well trained dietitian, and with capable assistants she can be the head of the dietary department. Many departments now have a dietitian, a steward or purchasing agent and a chef. The big problem is how shall these three people work together. Since divided authority is demoralizing, why not train dietitians who can supervise the entire department and who can select an adequate staff of workers to carry out the responsibility of the department?

The dietitian, as well as any other successful person, must have ability. The home economic professors in the better colleges have so organized their curricula that the graduating student is grounded in the fundamentals of science, institutional and personnel management and allied subjects. With this their responsibility ceases and they should no longer try to influence or guide the dietitian. At this point the hospital's responsibility begins. The nutrition student leaves the school of theory to enter the practical field of professional life, and if she intends to take up hospital dietetics she will enter one of the training courses offered by hospitals.

Just how should the intern courses of these student dietitians be organized and who should be the instructor? In the United States there are approximately 7,500 hospitals. Between sixty and eighty of these hospitals offer student dietitian intern courses. These courses last six months and each school graduates on the average of six dietitians a year, which approximates 360 in a year to train and to use. Is this too many or not enough? Are more or fewer training schools needed? Are these students well trained? If not, why not? What do the hospital superintendent and the president of the medical staff who usually sign the student's diploma know about her ability and how much have they contributed to her training?

These are questions that should be answered by the hospital superintendent. Hospitals are training dietitians for hospital work, and therefore it would seem that hospital executives should study the situation and work with the dietitians in their efforts to increase the efficiency of the hospital dietitian.

One of the most important things the student should get from her six months in the hospital is a knowledge of how she can and should cooperate with the other departments. To get this viewpoint she must know the responsibilities and duties of all other departments and she must know their problems. Then she will have a sympathetic understanding of the many emergencies and problems that constantly arise and through this understanding will come to realize the important relationship of the dietary department to all others. The most important part of training the student is teaching her how to cooperate with heads of other departments. In the student training courses each department should play a part in training the student. To arrange such cooperation all members of hospital staff must consider the training of the student dietitian as one of their important jobs. Since every hospital that conducts a training school will have a capable director of dietetics, not so much depends upon the head dietitian. Much, however, does depend upon the organization of the hospital. The hospital superintendent, the director of nurses, the instructor of nurses, the clinic supervisor and the purchasing agent all should contribute to the student's training. By doing this they will be better able to understand the problems of the dietitian. Under such conditions cooperation can be a reality. The lack of this understanding is one of the big reasons why young dietitians find it hard to fit into the hospital organization. They do not know how to cooperate because they do not know the problems of the other departments. In return the hospital organization does not know the problems and duties confronting these young dietitians.

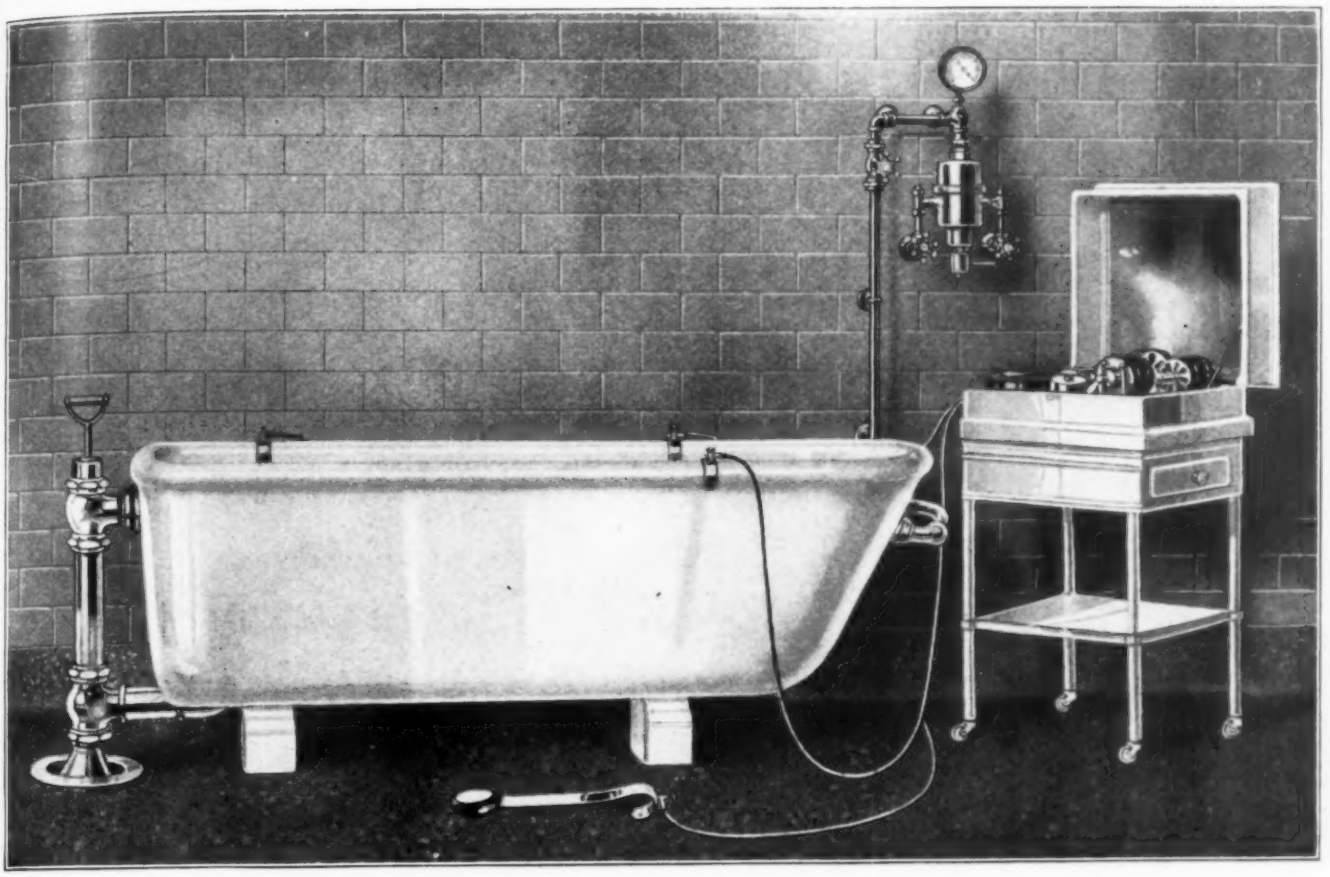
The education committee of the American Dietetic Association is constantly working on plans to improve conditions and to make the training of the student nurse and the student dietitian more practical. In all this work the assistance of the hospital superintendent is needed. Would it not be desirable to have a joint committee composed of hospital superintendents and dietitians to study the needs of better training for dietitians? Let this committee decide just what place the dietitian should fill in the hospital organization and then make definite recommendation for necessary training.

School Must Have Support of Staff

A properly organized school for student dietitians must first of all have the support of the hospital superintendent and of the administrative and medical staff, all of whom should be conversant with and in sympathy with the purpose of the school. It is absolutely indispensable that the directing dietitian have the understanding and the support of these officers when she undertakes the responsibility of a school. It is likewise important that the superintendent, when he selects a head for the dietary department, take into consideration the fitness of a candidate for directing and training students.

A second essential of the school is an organized teaching staff which shall include the superintendent of the hospital, the medical director or chief of staff, the director of nursing education, the director of dietetics and such specialist as may be needed from time to time to carry on the teaching of diet therapy. No hospital training course can be considered successful that fails to give the student the point of view of the hospital administrator, the hospital nurse and the doctor, as well as that of the dietitian. The head of the dietary department should be chairman of this group and should be responsible for the management of the students and for arranging lecture schedules. No student should be admitted for training without her approval.

There must be available for the school a well organized dietary department which shall include the supervision of the food supply for the hospital group, the supervision



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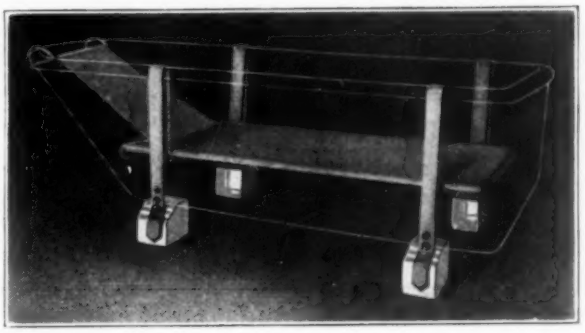

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of all infant and child feeding and the supervision of all metabolic and other therapeutic diets. The department should provide for a full direction of the teaching of dietetics and diet therapy to students and patients and for practice work of student nurses in diets. Any hospital whose organization makes it impossible to provide practice for the student in any of these units may legitimately affiliate with another hospital where such practice is possible.

The school must have an adequate and properly trained dietary department staff with a director or chief dietitian whose training and experience qualify her to direct such a course of training. There must be assistant dietitians in sufficient number to carry out the routine of the department, including the supervision of the work of the student dietitian. A bachelor's degree with training in foods, nutrition and institution management, and at least six months of training in a hospital of accepted high standards has been suggested as a minimum for assistants and, in addition, at least one year of successful experience as a hospital dietitian for the head of the department.

Study in Affiliated Institutions

It is not every hospital that has the organization, the equipment or the means to conduct such a school. Many hospitals and clinics feel justified in conducting training schools by an affiliation program that enables their students to get experience in one or more institutions. Although ways of conducting a student dietitian intern course vary, certain fundamental principles must be taught in a student course no matter what organization of course is followed. These principles are cooperation, administration, hospital diet therapy and social science problems. Many dietitians and hospital superintendents do not realize that every dietitian who takes up hospital work will be an administrator. There is no place in the average hospital for the theoretical and research types.

Since every student dietitian is a potential administrator, great care must be exercised in selecting the student dietitian and in accepting her into the training courses. An assistant dietitian in charge of special diets above all things must be an administrator. She is in charge of the diet kitchen where food is prepared by unreliable and changeable help for the most exacting and sickest patients in the hospital. She must see that this food is prepared on time, in the way each individual patient wants it and that it is served attractively. To fill diet therapy orders is a task, to train and supervise inexperienced and uninterested student nurses is a greater task and to cater to finicky and sick patients is the greatest task of all. Yet the assistant dietitian in charge of the diet kitchen must do all three, and assistants are usually the inexperienced dietitians or the ones that are not the most capable. In fact every hospital dietitian is essentially an administrator and as such must be chosen with care.

After a well arranged course in a hospital that teaches both hospital dietetics and administration, the young dietitian needs experience in various phases of dietary work. If larger hospitals would use more dietitians as assistants, allowing them to do supervision work and buying under well trained and capable supervisors, the problem of finding experienced dietitians would be solved. In this way the young dietitian would learn a great deal by working with buyers, stewards and chefs. She must, however, be given responsibility and as great a variety of experience as possible. She will then be a valuable assistant to a head dietitian in a small hospital where the two are responsible for the department.

It is in the smaller hospitals that dietitians feel the need of better fundamental training. They have more responsibility as a rule because the small hospital cannot afford and does not need a steward and a chef. Dietitians with the proper training and experience are a decided asset to such a hospital. From such dietitians, equipped as they are with student training and experience in both large and small hospitals, will come the much needed, capable director of dietetics.

There are many energetic, ambitious, well trained young women leaving colleges every year who are interested in hospital dietetics and who would be glad to enter upon such a course of training with a view to becoming director of dietetics in a well organized hospital. Many desirable young women are not entering this field because they feel there is no future in it. There is no incentive to work to become a department head when hospitals are not particular about selecting capable department directors. They see young women who have just finished a six months' student course put in as head dietitians and allowed to train other students because hospitals will not pay enough salary to secure experienced dietitians. Under the circumstances they are justified in leaving the hospital field since it apparently offers no future. In this way the hospital loses its best and most promising dietitians.

The dietitian is a part of the hospital organization. Since the hospital uses dietitians and the hospital trains dietitians, every hospital superintendent should be interested in the training of student dietitians because he is either training dietitians for positions or is anxious to find well trained dietitians. Hospital superintendents, therefore, are invited to assist in the work of increasing the efficiency of the hospital dietitian by solving the following problems: What is the dietitian's place in the hospital? Where can she get the proper student dietitian intern training course that will give her the hospital viewpoint? Where can she get necessary experience that will prepare her to become later a capable director of dietetics? Are there enough or too many student dietitian intern courses? What type of hospital should give these courses and who should govern their organization?

Small Occupational Centers—A Boon to the Mental Patient

Small occupational therapy centers may become the next step in the attempt to restore mental patients, who are recovering at state hospitals, to their rightful place in society, says an item in the *Journal of the American Medical Association*. The first step in this direction has been made at Hopkinton, Mass., where a small home, entirely free from institutional surroundings and which houses about ten patients is being used to care for convalescing mental cases. The surroundings are homelike, and the women patients are treated as members of one family.

The present center at Hopkinton is on the farm of Dr. Ermy C. Noble, assistant superintendent, Boston State Hospital, who, after the legislature had refused the appeal of the state board of insanity to provide for such an institution, gave his farm at a nominal rental, and an appeal was made to private subscribers to support the center. The home at Hopkinton has been in operation for a number of years, so successfully that it is being pointed out that a number of similar centers could be included in the state hospital system with the same excellent results.

The Community Hospital and Community Health

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OUT-PATIENT SERVICE

Conducted by MICHAEL M. DAVIS, Ph.D., Executive Secretary, Committee on Dispensary Development, United Hospital Fund of New York, 151 Fifth Avenue; New York
A. K. HAYWOOD M.D., Superintendent, Montreal General Hospital, Montreal, Que

A Pay Clinic for Syphilis in a Teaching Hospital*

THE graduate and undergraduate teaching methods of the department of dermatology and syphilology, University of Pennsylvania School of Medicine, Philadelphia, based upon the utilization of out-patient material, can best be understood by a brief summary of the organization problem that confronted the department and the principles that were employed in dealing with it.

In 1924 the department was reorganized and the account given here deals not with a finished product but with one in the process of development. The problem as it presented itself at the University of Pennsylvania included a transition from a two-man, part-time department to a fully staffed full-time department with separate but coordinate teaching and research objectives. It involved, furthermore, a change from a department of dermatology to a department of dermatology and syphilology in which, through concessions made by other departments, the treatment of syphilis was centered and the necessary unification of effort essential to progress in the syphilologic field thus secured.

Unit Organization Fundamental

Unit organization, with in and out-patient service under the same departmental control, was accepted as fundamental. The out-patient service while acting as a feeder for the in-patient service was to receive the larger part of the energy expended in development until the time when hospital reconstruction plans would permit a readjustment. Instead of conventional clinic hours full-time operation was planned which was to be accomplished by a full-time nonrotating staff, which could carry along the medical, scientific and investigative responsibilities of the organization free from the disruptions caused by frequent changes of personnel. Such a full-time staff, moreover, could maintain the continuous personal and friendly relations with patients that are necessary to prolonged observational contact and effective use of the teaching material. Emphasis was placed upon treatment, the plant and equipment that would make possible the most modern practice in actual therapy being considered essential. Successful treatment is, after all, the strongest practice builder, public or private, and is the best means for stimulating the growth of a clinic to adequate teaching proportions.

It was decided from the start to organize the out-patient department on a nonprofit, small fee basis. Patients were to pay for treatment in accordance with a schedule of fees approved by the hospital managers and controlled by the social service department. The earnings of such a department, while not likely to maintain it without special grants, could at least partially support the medical and clerical personnel employed by the out-patient service in the actual management of patients. After the first year, new equipment, renewals and repairs at the hospital have been matters of special appropriation by the managers and are not included in the budget statement. Rent, heat and light have at all times been part of the general hospital budget and have not been assessed against the earnings of the department.

In organizing a pay patient service the department of dermatology and syphilology acted upon, but went beyond precedents established in the practice of the University Hospital prior to 1924. While the University Hospital had assessed a small fee—ten to twenty-five cents a visit—against all patients, the adoption of a definite schedule of treatment fees was an innovation. As part of this quasi-business reorganization the department of dermatology has recognized an obligation to both trustees and managers to give a reasonably accurate annual report of business transacted, money earned and academic and research accomplishments. The making of such an annual report has required some approach to business methods of classifying and cataloguing the work of the department and has served as a useful stimulus to systematic and efficient management.

Pay Patients Found Cooperative

The adoption of a pay patient standard may seem out of harmony with a tradition that has considered charity patients as teaching material. As a matter of fact, precisely the contrary state of affairs can be made to exist. The self-respecting, small fee patient is more cooperative and intelligent when properly handled than is the average charity case. He is more regular in his attendance, he expects and, therefore, receives better care and as a rule he enters cordially into his side of the teaching

*Abstracted from "Out-Patient Service of the Department of Dermatology and Syphilology in the Hospital of the University of Pennsylvania," by John H. Stokes, M.D., in Methods and Problems of Medical Education (Eleventh Series), Rockefeller Foundation.

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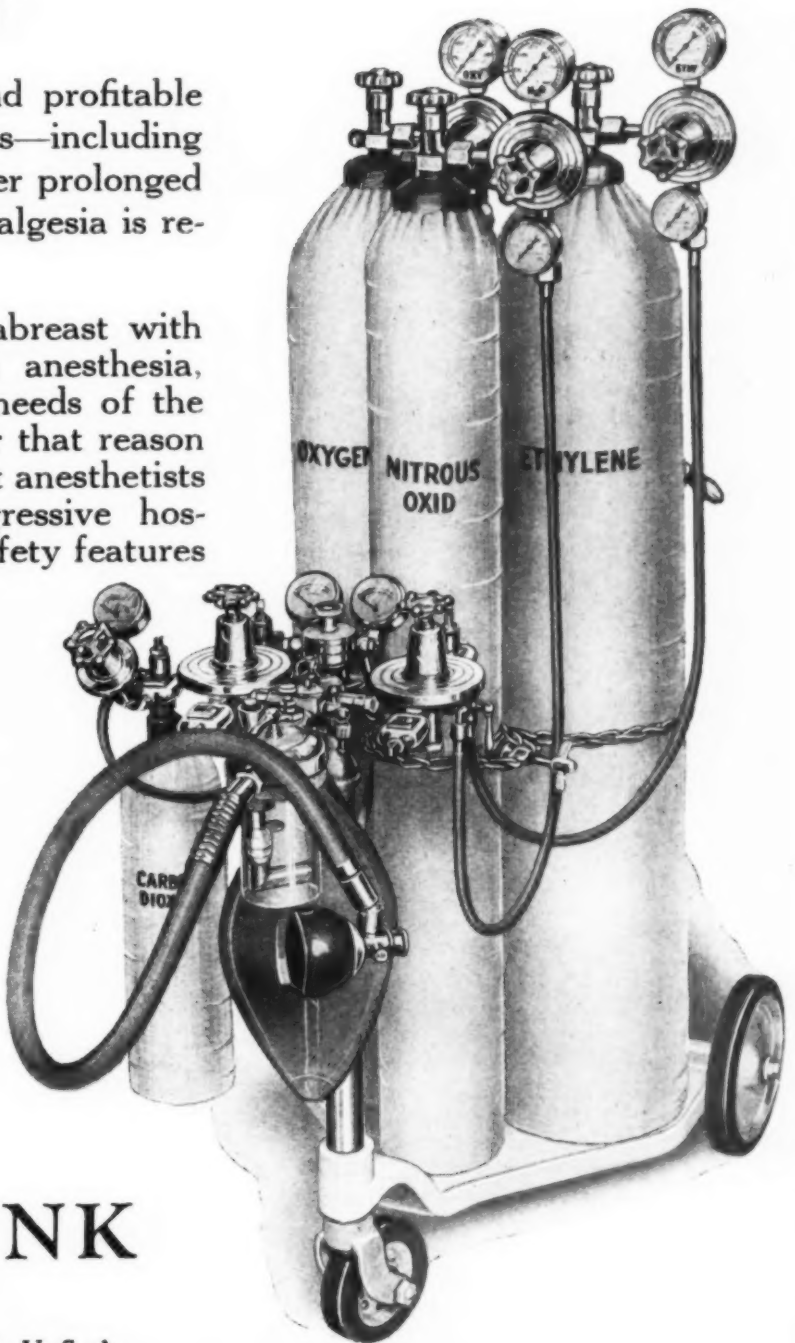

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material problem. It appears moreover that a legitimate field for the development of teaching material lies between the charity patient on the one hand and the patient who is able to pay minimum practitioners' fees for private service on the other. A large group between these two types has for a long time exploited free medical attention or has been obliged to accept charity because there was no intermediate alternative. This group has lately formed the foundation for a profitable experiment of large proportions in the treatment of venereal disease in a Middle Western city, and there appeared to be no substantial reason why it should not be similarly utilized for disinterested ends in the furtherance of medical education and research in even a conservative center like Philadelphia.

The general essentials of a dermato-syphilologic clinic for which the plant must provide are adequate light, accessibility, central desk or bottle neck control and sex segregation. The first point is separately considered. If possible such a clinic should open directly on the street, especially if its services are to be available at night. Sex segregation is accomplished by the full-time program, which makes it possible to maintain clinics at different hours for men, women and children. By bottle neck control is meant the admission and discharge of every patient past a single central desk which sees that all the official formalities connected with the control of his case are complete before he leaves the department. Central desk control impersonalizes and makes uniform the mechanism for the collection of fees.

Patients pay at the desk after they have seen their physician and before they receive their treatment. In the case of a patient unable to pay, an interview with the social service department takes place after the physician is seen and before treatment is given.

The schedule of fees now in use in the department is shown in the accompanying table.

SCHEDULE OF FEES

Nature of Treatment	*Fee Charged*
X-ray	$1.00
Quartz lamp	.25
Biopsy	1.00 to $2.00
Blood Wassermann test (includes examination)	1.00
Radium	1.00
Fulguration and surgery	1.00 to 2.00
Spinal fluid test	1.00 to 2.00
Blood Wassermann test repeat	.50
Whole blood	.50
Sodium salicylate and other intravenous injections	.50
Aolan, etc.	.50
Dressings	.25

The physical plant for a department in which the best possible relations are to be sustained between physician and patient with a view to securing cooperation for teaching purposes should be designed to give the patient a sense of mutual understanding. So far as possible each staff physician should have a room for his exclusive use while examinations are being conducted, and the senior men of the staff should have the continuous use of individual rooms, although the rooms may be small. Large rooms and high ceilings, apart from a due consideration for hygiene, lighting privacy and group demonstration, are not essential to an effective clinic. Several smaller rooms are preferable to a few large ones. Inside communication between the rooms, which does not compel the physician to appear in the corridor or the waiting room occupied by patients, does much to increase controllability. Since as much attention must be paid to prompt service as would be given in a specialist's office, the grouping of rooms for examination and treatment purposes should, wherever possible, reduce mere walking about or "pedestrianism" to a minimum. For this reason an adequate supply of telephones and an efficient operator are economies.

Additional basic principles that have been adopted in equipping this department and that are considered essential to the development of the clientele that makes the teaching methods possible may be summarized as follows:

Department Is Completely Equipped

The department with respect to treatment is a self-contained unit and is able to do anything within its proper field. It is not obligatory, for example, to refer patients to the roentgenologic service for superficial cutaneous x-ray therapy. It has a sufficient supply of radium for minor office manipulations of a purely dermatologic character. It is completely equipped for the treatment of every aspect of syphilis from the chancre to paresis. It has the essentials of equipment of the specialist's office for operative dermatology and actinotherapy. It is thus possible to offer to medical graduates entering the specialty every opportunity to learn therapeutic technique—an important item in making the service attractive to desirable men, to say nothing of securing more satisfactory results for patients than were possible in the old prescription writing dispensary. It is believed that there can be no more serious mistake in policy than to provide inferior equipment and methods because the clientele includes patients on the borderline of poverty. The equipment should in general be that of the medium grade of specialist's office without frills but with all the essentials. Patients should then be selected on the basis of their inability to pay standard fees rather than on their inability to afford the good service.

The second basic principle for a dermatologic clinic is adequate lighting. Through the use of skylights every examining room in the university hospital clinic, even those on the ground floor that are surrounded by the high brick walls of neighboring buildings, has the equivalent of north sky illumination. When daylight is insufficient the treatment and larger examining rooms are lighted by 400-watt daylight nitrogen tungsten bulbs in special dental fixtures that provide an unusually well diffused white illumination. The color of the walls is more ivory than white to avoid distorting the color relations in dermatology.

The quarters of the department now include:

1. A skylighted, window illuminated operating and treatment room, 10½ feet by 15½ feet, with an adjoining sterilizer room, 8½ feet by 10 feet. The equipment includes steam sterilizers for instruments, dressings, high speed centrifuge, dry sterilizing oven, incubators and a still of special make with additional complete equipment for the redistillation of water for intravenous injection. The room is so equipped that lantern slide demonstrations to small groups can be made with a transparent screen, and a viewing stand is provided for visiting physicians and small groups of students.

2. Four skylighted and window illuminated examining rooms equipped for examination and consultation. The two larger rooms are 9½ feet by 13 feet and 9 feet by 13½ feet, respectively. The smaller rooms are 9½ feet by 7 feet, which may be regarded as the lower limit in size for rooms used by individuals in examination and consultation. The rooms used for examination are equipped with a wheeled stretcher beneath the skylight,

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a small single pedestal desk and a washbasin with hot and cold water. The larger rooms contain desks for two staff members, and in addition an instrument case for minor operative manipulations and the taking of specimens.

3. One consulting room, 11½ feet by 6½ feet, without skylight.

4. A laboratory, 21½ feet by 8 feet, devoted to pathologic and serologic investigation directly involving the patient. In this laboratory a check Kolmer, Wassermann and Kahn test is performed on every blood sample sent to the general hospital laboratory. Special investigations are begun and carried as far as the facilities permit, and the equipment is such that at any time a member of the graduate staff who is curious about a laboratory aspect of his patient's problem may begin an investigation which may be completed in the laboratory of dermatological research.

5. A small laboratory, 5 feet by 8 feet, for dark field studies of early syphilitic lesions and for the immediate examination of pathologic material. This is also the photographic dark room of the department.

6. A staff room, 15½ feet by 11½ feet, in which the weekly forenoon conference is held and in which groups of undergraduates are assembled for brief didactic instruction in connection with patients in this section.

7. Two rooms, 8 feet by 10 feet and 8 feet by 5 feet, one of them skylighted as well as window illuminated, assigned as offices to the head of the department and his secretary.

8. A room, 8½ feet by 6 feet, for the x-ray generator, 8-inch spark gap, and the special rail tube stand for x-ray therapy. The generator is separately housed and operates on a special supply which provides an unusually steady current. The rail tube stand and table are housed in a separate booth lined with lead, an eighth of an inch thick, extending to a height of seven feet above the floor.

9. A room for ultraviolet quartz lamp therapy equipped with one air cooled quartz burner for alternating current.

10. One small inside room with dressing room for the administration of intramuscular injections.

11. One room, 8 feet by 10 feet, the office of the two social service workers. Arrangements are made so that this room is never used by both workers at the same time for interviews.

12. A central desk with record files and an accounting machine providing for eighteen separate accounting items. The desk is equipped to furnish a complete résumé of the activities and accounts of the department. Every patient goes to this desk first.

TYPES OF PATIENTS WHO ARE AND ARE NOT RECEIVED IN THE PAY CLINIC FOR SYPHILIS

Nonpay patients who are received	*Patients who are not received, either with or without fees*
1. University students who in the judgment of the social service department are in straitened circumstances and who in the opinion of the medical staff are suffering from a condition that constitutes a bona fide incapacity.	1. Patients who could pay larger fees than those the department is ordinarily authorized to charge.
2. Any patient unable to pay, for whom the department can render a distinctive medical or social service not obtainable for him elsewhere. Considerations of ability or inability to pay should not apply when the department is able to give a service to the sick not otherwise obtainable.	2. Those who are noncooperative—irregular in their treatment appointments, negligent in carrying out instructions, filthy in person, turbulent, indifferent, abusive or disobedient of reasonable rules—and those who refuse to be seen by medical students.
3. Any patient with an infectious condition who can be rendered at least temporarily noninfectious by a reasonable amount of emergency treatment given him gratis in the department. This includes primary and secondary syphilis, and is mandatory in such cases. It seldom exceeds three arsphenamin injections.	3. Patients under treatment for venereal diseases who are unable to pay for treatment and for whom the city and state provide adequate treatment elsewhere.
4. Any member of a syphilitic family or an individual contact brought at the department's request in an effort to follow up the ramifications of a syphilitic infection in the interests of the public health. As soon as practicable after examination, single cases of this type should be placed in the care of free clinics. It is recognized that in order to apply reconstructive methods to certain situations, it may be necessary to carry a family gratis for a time, but every effort should be made to place such groups on a paying basis at the earliest reasonable moment.	4. University students able to pay reasonable treatment fees in private practice. The department will examine for diagnosis any student sent by the university health authorities.
5. Any patient, unable to pay, whose attendance on the clinic may be desired as a matter of scientific, investigative or teaching interest. Patients in this classification are not *ipso facto* excused from payment of fees, and should be expected to pay if and as they are able.	5. University students, whether able to pay fees or not, who have merely minor cosmetic blemishes.

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13. There is in process of construction a room in the basement accessible to the department, 12 feet by 21 feet, to be used as an artificially lighted photographic studio, largely for flashlight portraiture of dermatologic conditions. This will be used in conjunction with the dark room equipment in the quarters as above described.

The treatment equipment of the department also includes a 10-milligram radium plaque and a resonator for fulguration and electrocoagulation work.

This department has at all times sought to create an atmosphere about its service comparable to that in the office of the private physician. Successful control and follow-up of the medical patient begins when he enters the door of the department and not as he leaves it. The entire future of the department, medically, scientifically and financially, depends upon the impress that the professional and nonprofessional staffs are able to make upon the patient during his contact with them and upon the friendliness, affection and the fundamental humanity that he meets in the department. Much attention from the start was centered on selecting personnel that would maintain such an atmosphere, and to their consistent efforts is due much of the success of the department.

Intelligent social service was recognized from the start as an essential element in the development of the department. Social service is relied on to combine the practicalities of budget requirements and earning capacity with high standards of humane conduct towards the sick and needy. Social service does its share in establishing the initial good will of the patient and develops the mechanism for utilizing that good will in the form of a successful follow-up of results.

The final problem confronting the service in its long range plans was that of satisfactorily adjusting professional relations with the physicians of Philadelphia and its surrounding territory. From the start it was necessary to insist on the principle that no patient, regardless of influence, antecedents or medical condition, should receive treatment in the department if he were able to pay a minimum professional fee. This was arbitrarily set at $5 for a consultation and $3 for treatment. Any patient who could pay these amounts was *ipso facto* excluded from the clientele. In spite or, perhaps, because of this ruling, the department has steadily received from outside physicians a certain amount of referred work. This has slowly increased since the reorganization was undertaken and now totals about 200 patients a month.

Use of Patients for Demonstration

How can patients, selected in this manner, be used for teaching purposes, particularly since such patients are to be presented before a large amphitheater group of students? The essence of the matter seems to lie in personal persuasion and in the cultivation of personal influence with the individual patient by members of the staff, in careful attention to the niceties of contact between physician and patient, in the protection of the patient's delicacy whenever occasion demands and in the limitation of professorial consultation to the patients who will consent to appear in clinic. It is a rule of the department that neither the head of the department nor his chief executive aid can be seen by the patient directly. It must always be through consultation requested by a member of the staff or, in case of the head of the department, this consultation must take place in the presence of either the graduate or the undergraduate group of students. The value of such an atmosphere to effective teaching plans and methods, both to the graduate and to the undergraduate, cannot be overestimated.

Successfully Reclaiming Used Hospital Dressings

The practice of using hospital dressings a second time has been in vogue for twenty years in Brugmann Hospital, Belgium, says the correspondent of the *Journal of the American Medical Association* in that country. According to the director of the hospital, Mr. Heusquin, there was at first much opposition to the practice and even yet there are some who still oppose it.

Nevertheless, the method used at Brugmann Hospital leaves no doubt as to the aseptic condition of the reused bandages. The dressings of a single service only are first marked and then placed in a vat where they are allowed to soak for twenty-four hours in a solution of sodium bicarbonate and soap. They are transferred to metal baskets to drain. They pass then to a boiling solution containing 200 liters of water to 1.5 kilograms of dressings, together with 300 grams of soap. After they are boiled the dressings are then rinsed in fresh water. They are then soaked for ten minutes in a 1:1,000 solution of chlorinated lime after which they are again rinsed in plenty of water. While they are still wet, the compresses and bandages are separated. They are dried and the bandages rolled with the aid of an old sewing machine adjusted for that purpose. The compresses and bandages are then returned to the service from which they came and are there subjected to a final process to ensure thorough sterilization.

In 1928, 8,000 kilograms were cleansed and sterilized, the cost of such procedure amounting to about twelve cents, a kilogram. The saving thus realized amounted to 320,000 francs, or nearly $13,000.

Occasionally the dressings are soiled to such an extent that they are burned at once.

"Service With a Smile"

"Service With a Smile," is the caption that heads a list of ten suggestions—not commandments—that Louis Cooper Levy, superintendent, Jewish Hospital, Cincinnati, has posted in convenient places as a guide to the conduct of nurses and employees of the hospital with relation to their treatment of patients.

These are the suggestions:

"Strive to be courteous in your contact with the patient and the public.

"A smile is better than a mile of gloom.

"Statler once said, 'The guest is always right.' Therefore, we must treat our patients, visitors and everyone else with consideration, or, better still, as we ourselves would wish to be greeted and treated.

"Efficiency and courtesy should be our aim and policy.

"A display of temper discounts your best qualities.

"Do not air unpleasant opinions. 'A still tongue makes a wise head.'

"Make every effort in behalf of the patient.

"Walk, talk and laugh softly. Be quiet and dignified at all times; your attitude will redound to the credit of yourself and to the institution.

"Actions speak louder than words. Therefore, let your daily contact with your fellow workers and the public be courteous, gracious and efficient.

"It is the desire of this institution to furnish the best of service and constructive criticism of any character is earnestly solicited by the superintendent of the hospital."

San Bernardino Gets 100 bed hospital

Campaign for $80,000 produces $102,997

Last month we reported the success of a Three Million Dollar campaign in Detroit.

Illustrating the variety of the projects we undertake, we this month report the success of a small campaign for funds at San Bernardino, California, to fulfill the conditions laid down by the Sisters of Charity who agreed to build a $500,000 hospital provided the citizens of San Bernardino would supply cash to the extent of $80,000 and a site.

The following is an extract from the June 18 issue of "The San Bernardino Sun":-

"San Bernardino's new 100-bed hospital, to be built at a cost of $500,000, becomes a certainty with cash now totaling more than $99,000 and other subscriptions in sight which will safely take the hospital fund far beyond the hundred thousand mark, and at least four free sites offered."

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Conducted by C. W. MUNGER, M.D., Director,
Grasslands Hospital, Valhalla, N. Y.

Modern Utility Units That Meet the Demands of Private Patients

WITH the increasing trend of all illness toward the hospital, there is a growing demand for improvement in private room service and convenience. To meet this demand, the modern utility unit has been devised. In this unit a convalescent may find the conveniences he wishes and at the same time it offers a place in which the nurse may do properly and comfortably what the patient requires.

Such a unit is needed for the following reasons:

1. To secure prompt service. Sick persons are often impatient and are often justified in wondering why it takes a nurse so long to get a bedpan or an emesis basin. A patient who pays $12 or $15 a day cannot see why all his needs should have to be supplied from rooms half a block or even 100 feet distant.

2. To accommodate convalescents and chronics who are up and about. They do not always wish to go down the hall a longer or shorter distance for all conveniences. "My room at home is next to the bathroom," they complain, and the hospital has only weak excuses to offer in reply.

3. To avoid carrying unsightly and odorous articles through the corridors. A visitor or convalescent patient may encounter in the hall first a dinner tray and then a used bedpan. Needless to say, the impression is unpleasant.

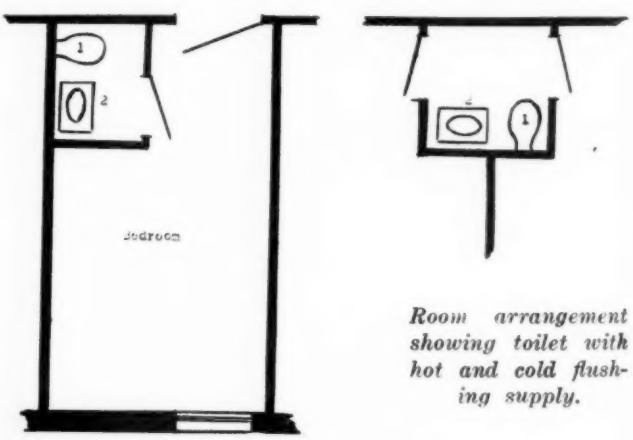
Hotel-Hospital Idea Helps Institution

4. To help develop the hotel-hospital idea which is taking root and becoming a source of satisfaction and income to many institutions. Halls free from unsightly articles and suggestive odors and rooms with all conveniences close at hand help the doctor with his task of getting and keeping the better paying patient in the hospital.

The cost of installing such utility rooms is often thought to be prohibitive. When an administrator faces the thought of adding dozens of plumbing fixtures to a building, he must consider any number of attendant problems, not to mention the water and repair bills. On the other hand, hospitals that have installed modern utility rooms find them both a source of satisfaction and of income. If the price of a room can be advanced one or two dollars a day because of such utility service, it will require only a short time to pay the initial cost.

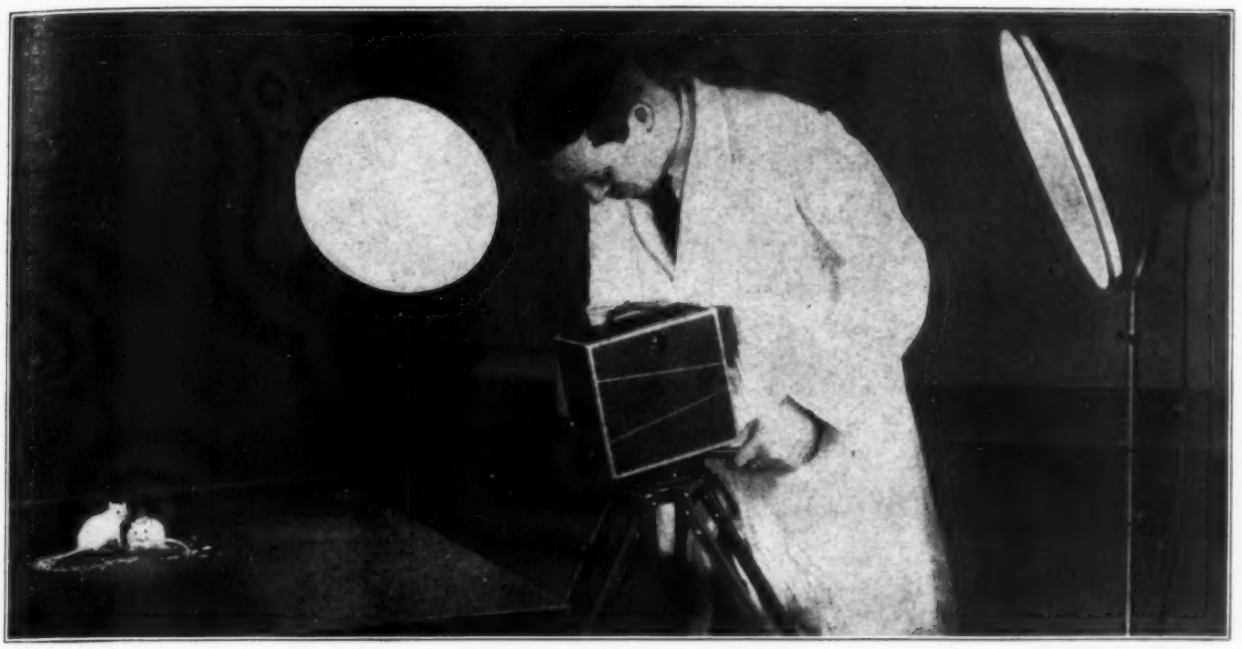
The space required for these utility rooms is a consideration. They demand a floor space of at least 4 by 5½ feet as a minimum if a lavatory, a toilet and storage space for utensils are provided. This, multiplied by the number of rooms to be served, means adding to the size of the building or subtracting from the size of the rooms. One such room may be placed between two bedrooms and made to serve both by building a slightly larger utility room and by making a different arrangement of its fixtures. Or, better still, the lavatory may be in the patients' rooms, to be used by the doctor, the nurse or the patients, while the toilet and utensil storage may be placed between two rooms. Some patients will always be willing to pay more for the privilege of having their own private utilities, and in many hospitals there will be at least a few rooms with a bath added to these conveniences.

The location of such rooms must be decided in accordance with local building ordinances. One city has ruled that utility rooms must have outside windows; in other cities they may be placed anywhere, provided that proper ventilation, a necessity in any event, is secured. In the latter case, the difficulties of planning are lessened and the expense of extra windows is saved. The ventilation, however, to be effective, must be mechanical, which again increases costs.



Room arrangement showing toilet with hot and cold flushing supply.

The walls and floors of these utility rooms must be easily cleanable. Tile is preferred but cheaper materials will answer. Probably the best of the less expensive ma-



Mr. Rat in the Leading Role

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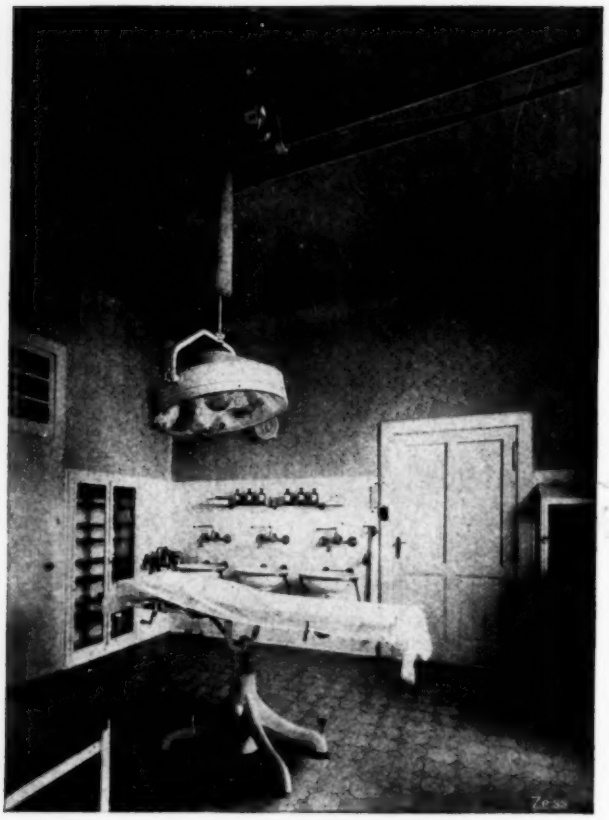

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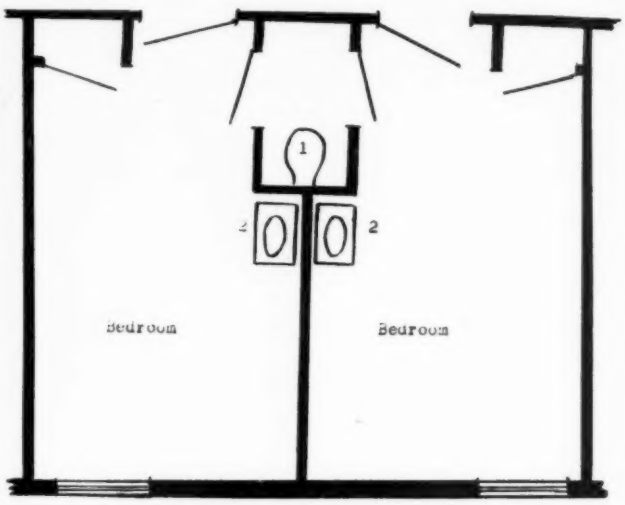
terials are an enamel paint for the walls and a smooth cement for the floor. A composition or mastic floor presents a better appearance; or a cement floor may be covered with good linoleum which, if it is well cemented down, will not be flooded with water.

Such a utility room should contain as equipment: a toilet supplied with means for cleansing with both hot and cold water bedpans and other utensils; a lavatory that delivers tempered water; a rack for utensils; table space or its equivalent and a shelf for toilet articles, a towel bar, a paper rack and the ordinary bathroom equipment.

The toilet should have a bowl large enough to accommodate a full size, regulation bedpan. It should be equipped to provide for thorough washing with both cold and hot water. There are several such toilets on the market.



Lavatory with combination faucet for scrub-up.

Those with an upspringing spray are to be avoided, because an uninstructed person who attempts to use them is usually showered with water. Those with a swinging arm connected with cold and hot supply pipes are the best. The swinging arm is folded back against the wall when it is not in use and extends over the bowl when it is needed. The vertically folding arm is preferable.

The lavatory should be fitted with a combination faucet, preferably a small goosenecked or a swinging nozzle, which delivers the water high enough to obviate a person's stooping or striking his hand against the side of the bowl. Such an arrangement may be fitted to an ordinary lavatory slab, if the hospital cannot afford a lavatory of special manufacture. In fact, the lavatory should be in effect a small scrub-up basin. Its slab should be flat, oblong and as large as convenient to afford space for utensils.

Combination Utensil Rack Described

For table space and the storage of utensils, a combination may be made. The utensil rack designed for Graduate Hospital, Philadelphia, was made to slip underneath the shut-off valves of the lavatory. Although it is but eighteen inches high, it provides room to store a full size bedpan, a nest of basins, including a deep bath basin, a urinal and an irrigating can, while the top, 17 by 17 inches, makes a small table for the preparation of solutions and enemata.

Such utility rooms, properly equipped, are a joy to the patient, the nurse and the doctor.

The new liquid soap dispenser always on duty

SURE delivery of ample quantity of liquid soap makes the Midland Lohador Foot Pedal Dispenser favored in hospitals the country over. Pure white—easy to keep clean. Rests firmly on the floor—yet light enough to be easily portable.

Midland Lohador Foot Pedal Liquid Soap dispensers will be placed in your hospital without cost to you. Write for particulars.

MIDLAND CHEMICAL LABORATORIES, Inc.
Dubuque, Iowa, U. S. A.

LOHADOR
FOOT PEDAL LIQUID SOAP DISPENSER

When appetites need pampering

many dietitians serve this dainty dish

¾ cup uncooked Cream of Wheat
4 cups boiling salted water
¾ cup sugar
1 small can grated pineapple
Cream
Pour Cream of Wheat into rapidly boiling salted water. Cook for fifteen minutes. Add sugar and grated pineapple. Serve hot, with cream, or cool, moulded.

WHEN hot days drag through hospital rooms and sheets feel like asbestos, the dietitian knows *she* can't afford to wilt. That's the time to prove her mettle by serving particularly appetizing and tempting food.

Such a one is the dessert given above. Convalescents' spirits rise at the mere thought that they're well enough to eat anything so festive. A chilled mould of pudding, its snowy softness delicately flecked with golden pineapple. Every cool spoonful is a lingering delight.

Yet nurses are relieved—doctors nod approval. For this pudding with the party air is bland enough for patients who are really sick. Its base is Cream of Wheat—the dietitians' stand-by because it is so simple and easy to digest, and because it lends itself so readily to ingenious combinations.

Exceptionally rich in carbohydrate content, Cream of Wheat, used often in the patients' dietary, supplies a high degree of nourishment, and is an excellent carrier for milk and cream.

Keep Cream of Wheat always at hand, ready for frequent use. Its triple-wrapped-and-sealed carton is utterly immune from all contamination. And in each package there are forty generous servings, at less than 1c each.

Try this pudding in your menus this week and enjoy your patients' pleasure in it.

FOR THIRTY-TWO YEARS A STANDARD FOOD ON PHYSICIANS' DIET LISTS

Cream of Wheat

The Cream of Wheat Corporation, Minneapolis, Minnesota

In Canada, made by The Cream of Wheat Corporation, Winnipeg

Australia Has Its Heating Problems, Too

Heating problems are not confined to hospitals in the United States. The most economical method of heating the hospital is the subject of much research in other countries as the following letter from J. Borrie, M.V.I.E., consulting engineer, Melbourne, Australia, will show. Mr. Borrie writes:

"I have taken the liberty of referring to an article on 'Modernizing the Heating Plant in the Hospital,' in the April issue of THE MODERN HOSPITAL. This article touches on subjects that I have been investigating closely for two hospitals. In the course of the investigation I have found that insufficient attention has been given to problems having to do with the economical equipment of the boiler house, the power plant, the heating system, the laundry and the kitchen, and that these problems have been too often left in the hands of the architects when they should have been intrusted to a competent engineer working in conjunction with the architects.

"I fully appreciate all that the article says about the use of oil fuel since the use of oil fuel is one of the problems that I have had to investigate very closely in connection with my work with the two hospitals to which I have referred.

Cost Prohibits Use of Oil

"Both hospitals were faced with the necessity of building new boiler houses and installing new boilers. This question, therefore, was gone into very thoroughly. While the desire was to use oil in view of the advantages mentioned in your article, it was found that the cost would be excessive and the saving in labor nil. I may mention in this connection that we have no oil fields in Australia and it is very doubtful if oil will ever be found. Consequently we have to depend on imported oil, and the best quotation for delivery is eighty-five shillings a ton.

"The fuel being used by these two hospitals is gas works coke, with a calorific value of 13,000 B.t.u. In one case it is delivered at twenty-five shillings and in the other at twenty-six shillings a ton. With the coke there is no smoke nuisance. In one case the ashes are carted away free and in the other three shillings and sixpence a load is paid for them.

"Recently I invited tenders for two new boilers for one of the hospitals, with clauses to enable the representatives of oil burning equipment to tender. One of the conditions was that one boiler was to be fitted for oil burning and the other for coke burning. The test in each case was to be for one month under normal working conditions, and the unit of comparison was to be the cost per inmate per month. In all cases the representatives of the oil burning equipment said they could not compete with coke at that price.

"The following is an estimated cost for one hospital, taken over a period of twelve months. The coke is the actual amount burnt, and the oil is estimated on the B.t.u. calorific value: amount of coke burnt in twenty-six weeks, 469 tons at twenty-five shillings, £579.65; estimated consumption of oil, 273 tons at eighty-five shillings, £1,160.5. The extra cost of oil compared with coke in fifty-two weeks amounted to £1,161.70.

"The boiler referred to is an underfired multitubular, 15 feet by 4 feet 6 inches with fifty-two 3½ tubes; heating surface, 848 square feet; working pressure, 90 pounds. The boiler had been in service for twenty-five years and the setting was poor. This served a hospital

Modern Hospitals Are Turning to This New-Type Hot Food Storage Cabinet

Heated Entirely by Electricity, Eliminating Steam and Water Throughout

Keeps Every Hot Food Fresh *for Hours; Maintains Diet Values Intact!*

HERE is the most modern, sanitary, economical and satisfactory equipment yet produced for the storing of hot food between range and serving time.

Hospitals everywhere are asking about it. For, applying utterly new, patented principles of food preservation, it marks a new era in hot food service—whether diets, ward service, or staff feeding.

Cereals, broths, soups, meats, vegetables—even pastries, if you wish—are prepared in the morning and served hours later with the same flavor, appearance, tenderness and food value as when first cooked!

Even special diet dishes are prepared in advance, kept hot for hours, then served identical in every food value with the same dish rushed direct from the kitchen.

What It Is—How It Works

This electrically operated hot food cabinet is called the Thermotainer. It operates entirely without steam or water, thus practically ending food deterioration. For, kept with original heat and individual moisture content intact, *every food must remain fresh as when newly cooked.*

Every nourishing, tempting quality of each food is retained for many hours! Consider what this means in every department of hospital food service.

Thermotainer Hospital Kitchen Units are constructed of Monel Metal throughout. They come in 42-inch, 48-inch, 55-inch and 60-inch lengths. A 55-inch unit will provide storage space for about 65 servings.

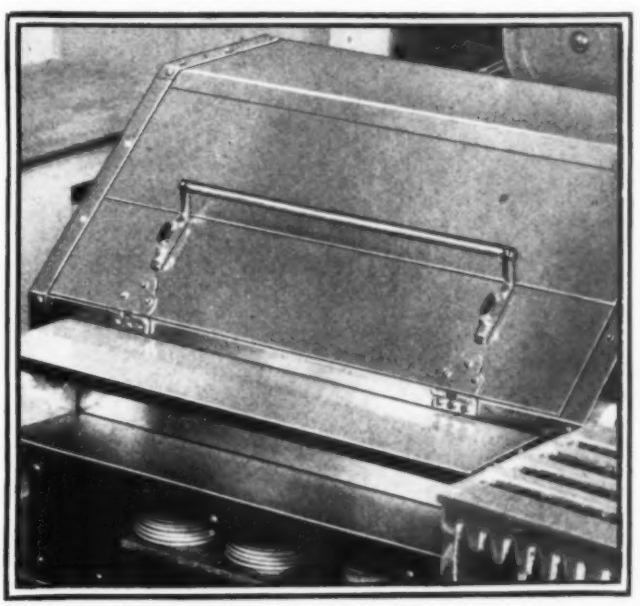
Every hospital installation of Thermotainer units is a special piece of work, engineered to meet the requirements of the particular service it must meet. We will be glad to analyze your individual problems, suggest individual equipment, and show you exactly what other hospitals are doing to meet those problems. Simply write, on official letterhead, to any office listed below. WATERS-GENTER COMPANY, Dept. T-16, 219 North Second Street, Minneapolis, Minn.

A Division of the McGraw Electric Co.

Eastern Sales Office: Hector C. Adam, Inc., 196 Lexington Ave. at 32nd St., New York. *Pacific Coast Sales Office:* C. N. Hildebrandt, 943 Russ Bldg., San Francisco, California. *Chicago Sales Office:* Waters-Genter Company, 222 W. Adams Street, Chicago, Illinois.

The **THERMOTAINER** *System*

(U. S. patented, registered, copyrighted)
Made under Johnson Patents by the Waters-Genter Co.
Makers of the Famous Toastmaster



(All Equipment Made of Monel Metal)
Any kitchen Thermotainer unit can be equipped with Colson wheels for transporting food to any distance

3 Conveyor Types, Also

In addition to stationary Kitchen Units, Thermotainer Units for hospitals come in three special Conveyor Types. A Drawer Conveyor for plate service; Tray Conveyor to use when tray preparation is completed in kitchen; and the Inset Conveyor, designed to carry food for tray service in corridors.

THERMOTAINER System Includes

Roll Warmers. *2, 3 and 4 drawer Stationary and Conveyor types. Preserves rolls, pastry and bakery goods in fresh and hot condition for hours.*

Hot Food Conveyors. *To serve any number of people at a distance from the kitchen. For banquets, room service or hospital use.*

Cafeteria Service Counter. *Replaces the steam table for displaying and serving meats, vegetables and rolls in efficient and sanitary manner.*

Kitchen Units. *Replace steam tables for storage of food in the kitchen.* 218

THORNER'S
Silver Service

Thorner's Silver Service is made of 18% Nickel Silver with a quadruple silver plate. Wears a lifetime. Replacement through breakage is forever eliminated. It is never affected by wear or polishing.

Illustration features Thorner's Improved Three-Compartment Hot Water Plate. Tea Set is seamless with inside rounded bottom and reinforced band around top. Covered Soup Cup with Silver Soldered Handles. Sherbet Dish, Gravy Boat, Individual Napkin Ring and Tray Marker, Bud Vase, Salt and Pepper Shakers and Superior Grade Sectional Flatware.

THORNER BROTHERS

Importers and Manufacturers of Hospital and Surgical Supplies

135 Fifth Avenue
NEW YORK CITY

of 236 inmates, provided steam for engine for laundry, supplied steam for three washing machines, a drying room and a six-roll by 108-inch ironing machine working forty-eight hours a week.

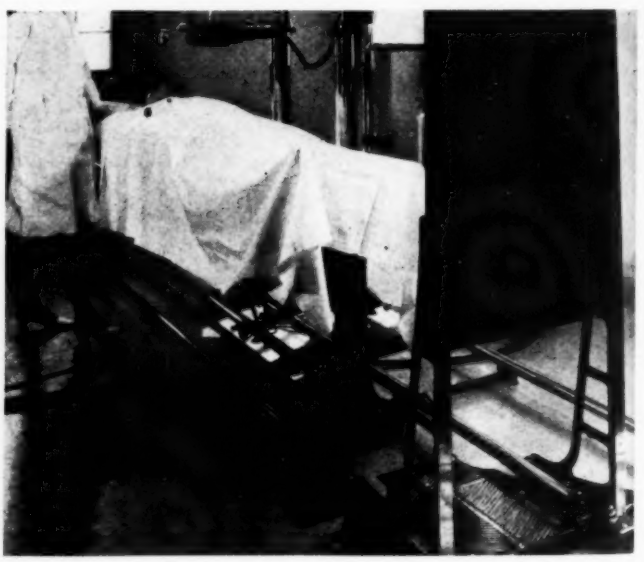
"The steam is then carried underground 340 feet to the main four-story building and is used for hot water heating in winter, for cooking, for the kitchen on the roof and for the usual sterilizers, including three sterile water systems. It is then carried under a street and supplies a large out-patient department in addition to the nurses' quarters with hot water in sixty rooms, besides the bathrooms. The most distant autoclave is more than a thousand feet from the boiler house. In this layout no attempt has been made to utilize the exhaust steam which all runs to waste, the insulation of the steam pipes being very defective.

"Plans are being prepared to more than double the size of the hospital, and land is being obtained so that the new boiler house and laundry will be in a central position. Provision is being made for the full utilization of all exhaust steam. In addition there will be a special thermal storage of hot water and possibly a thermal storage of steam, in order to get the utmost economy from the boilers and to reduce the working hours during the night shifts."

Shockproof X-Ray Apparatus Installed in New York City

A new type of x-ray apparatus, completely insulated in oil and with all high voltage wires completely eliminated, has been announced.

In appearance the apparatus resembles only remotely the x-ray apparatus now in use. The Coolidge x-ray tube, the heart of the apparatus in which are generated the invisible rays of light that penetrate the body and make possible the photographing of bones and organs, is con-



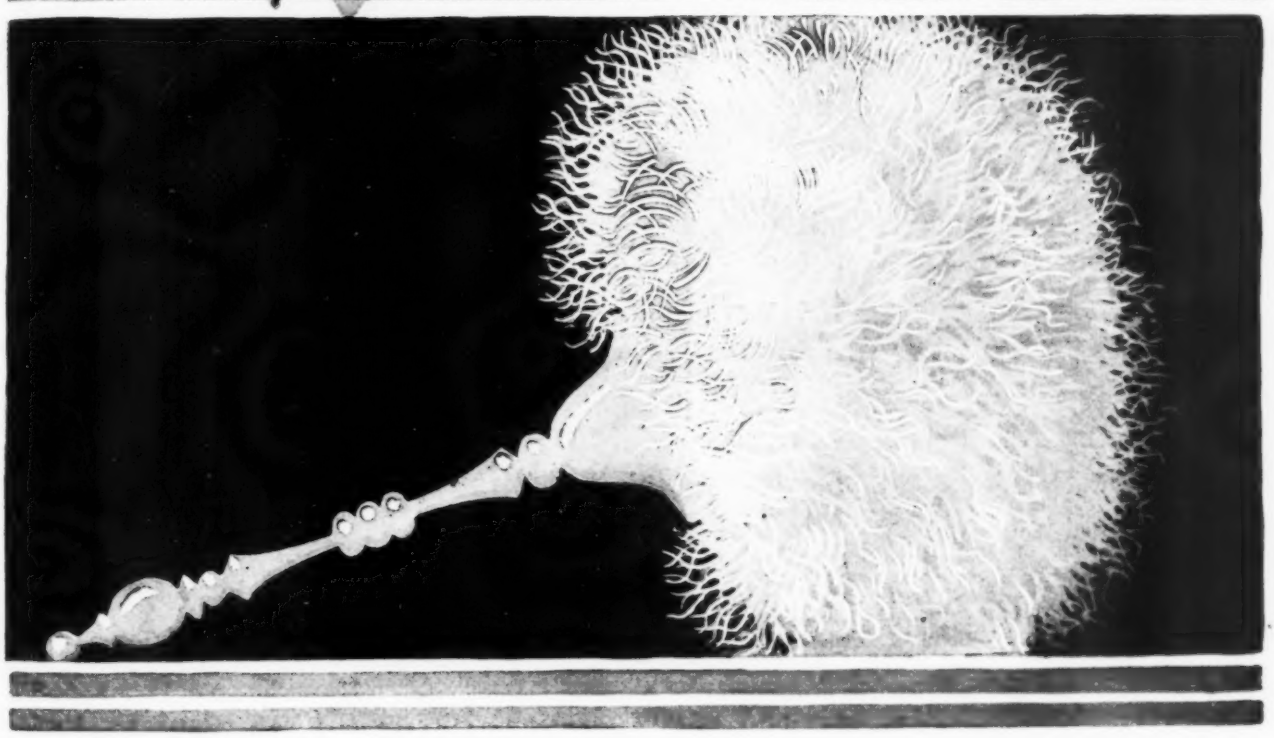
cealed in an aluminum container filled with oil. It more nearly resembles the camera of the photographer than the complicated x-ray apparatus one now sees in hospitals and offices of physicians. An adjustable slit diaphragm permits the passage of the invisible rays by which radiographs are made.

Virtually any part of the patient's body may be x-rayed

PEQUOT
REG. IN U.S.PAT.OFF.
SHEETS
AND
PILLOW CASES

are used more by
HOSPITALS
than any other brand
because of their

EXQUISITE FEEL



Just touch a Pequot sheet! Take it in your fingers—crumple it—smooth it out. How firm and strong that texture is! How much real "body"—without "filler" or pretence of any kind! Note the luxury of this smooth fabric! How soft—how lustrous! It makes one relax—helps patients to rest and store up reserves of strength. Even your treasurer rests more easily—Pequot sheets are so economical! Pequot sheets are now available with your name woven in. Send for details. Made by Naumkeag Steam Cotton Co., Salem, Mass. . . . . Parker, Wilder & Co., New York, Chicago, San Francisco and Boston: Selling Agents.

DOWN GOES GLASSWARE

What is This?

This is A Gentleman of the Genus Bos.

Why does He have Whiskers?

Oh, just to Indicate that he Is a Gentleman.

Where is He?

We are Pretending He is In the Proverbial China Shop.

What is He Doing?

He's Knocking Over a Table with some Glassware on It.

What for?

Well, we Had to have Some sort of a Hook-up.

What do you Mean,"Hook-up"?

Some kind of a picture, you know, to attract attention. Something not too far fetched, to illustrate our heading, "Down Goes Glassware." You see we've just made an unusually favorable purchase and as a result we're making a special price to Hospitals for the month of August only on all surgical and hospital glassware (except medicine glasses and prescription bottles).

Now, do you get the connection?

This is a Real Opportunity to stock up on Glassware.

WILL ROSS, *Inc.*
457-59 E. Water St. Milwaukee, Wis.

P. S. You will receive a special circular on this, August 1st. If you miss connections with it, better drop us a line.

HOSPITAL WILL ROSS INCORPORATED SUPPLIES

HOSPITAL GARMENTS AND ACCESSORIES

PAPER TRAY COVERS AND NAPKINS

SANISORB THE LOGICAL CELLULOSE ABSORBENT

from any angle without moving the patient. Manipulation of the device to the patient's position replaces the shifting of the patient's position to suit the needs of the device. Such manipulation is an invaluable aid when severely injured patients are being x-rayed.

The movable part of the apparatus weighs approximately 500 pounds, yet it is so delicately balanced that it can be moved literally with the little finger. This feature, combined with elimination of danger from contact with exposed wiring and possibility of shock to operator or patient, makes it possible to obtain radiographs as rapidly as though a photographer were employing an ordinary high speed camera.

In a recent demonstration at the company's laboratory, fifty-five x-ray pictures were made in four hours, all of uniform quality, as the timing of the exposures for various parts of the body have been carefully charted and made virtually automatic.

By insulating the actual x-ray apparatus in oil, another scientific obstacle in roentgenology has been overcome. At high altitudes, such as occur in the Rocky Mountain regions or in South America, x-ray apparatus of twice the power usually employed at sea level is necessary because the higher altitudes decrease the capacity of the machine. With the apparatus immersed in oil the new machine operates uniformly at all altitudes and is not affected by extremes in humidity.

The encasing of the machine further eliminates the noises that have usually been associated with x-raying. A pilot light on the switchboard indicates when the current has been turned on.

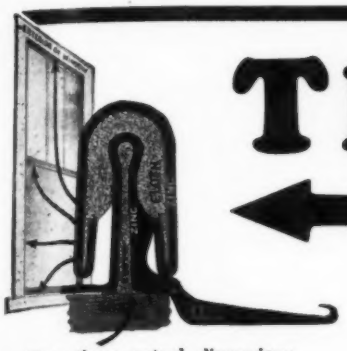
Music for Hospital Patients by Means of Power Amplifiers

The value of music to psychotherapy has long been acknowledged, but it is only recently that it has begun to be used in general hospitals. The immediate results have proved the effectiveness of music in postoperative treatment. Interesting music aids the doctor in such treatment because it distracts the patient's attention from the doctor's ministrations and thus relieves the nervous strain of both patient and physician. Similarly it makes the work of the nurse less trying. In the later stages of convalescence, music relieves the monotony of the patient who feels that he is well enough to go home. Here the happy, satisfied mental condition that is necessary is fostered by music.

Music used in hospitals these ways is usually broadcast throughout the rooms by means of power amplifiers operating head phones or loud speakers and supplied from a central source. Possibly in the office, or in any convenient location the initial assembly is installed and connected with the individual power amplifiers placed at advantageous points throughout the building. The music may be obtained either by a radio pick-up, when a suitable program is being broadcast, or by a phonograph pick-up, in which case recordings uniquely appropriate may be selected.

Another use for power amplifiers that is gaining in popularity in hospitals is that of paging the members of the hospital staff. By means of a microphone pick-up used in conjunction with power amplifiers and loud speakers placed in the corridors, any doctor or nurse may be paged from the central location. This saves the often useless search for persons throughout the building.

The usual hospital installation consists of a radio,



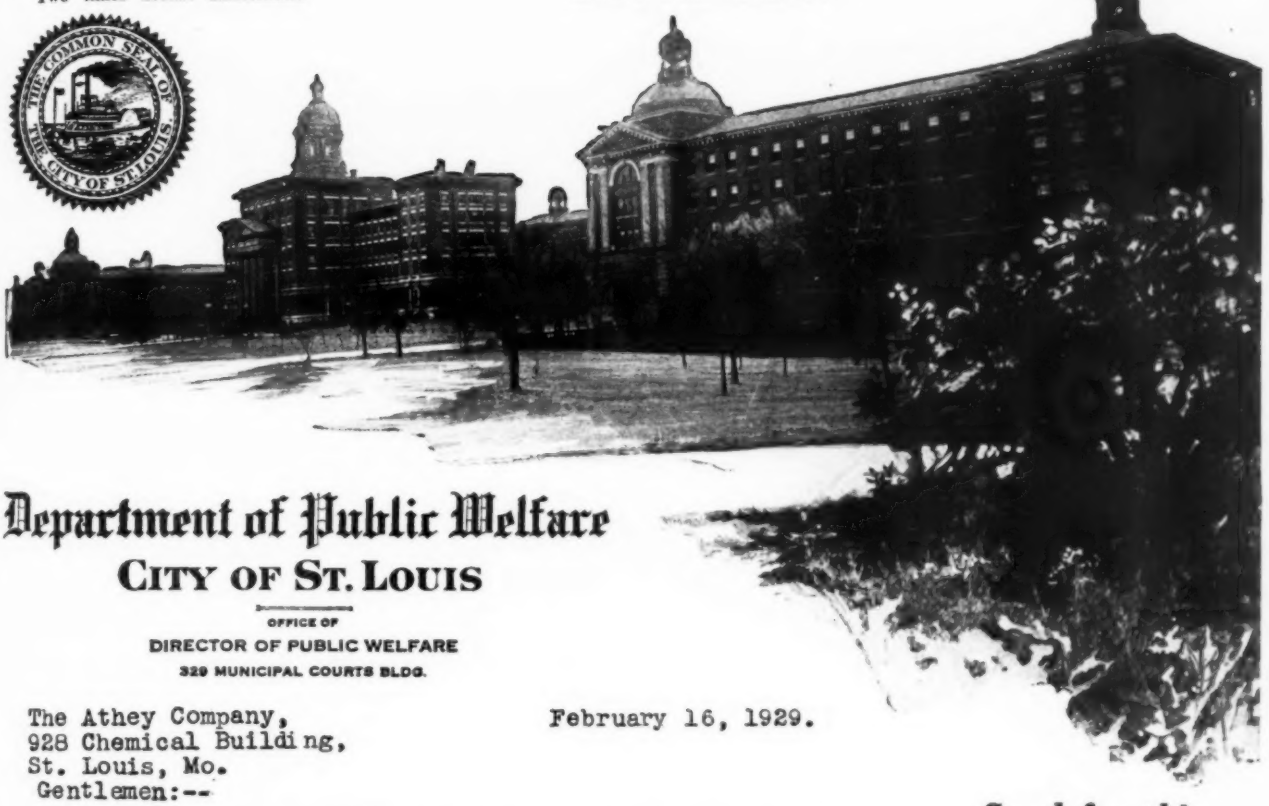
Two times actual dimensions.

This

Eliminated a 350 H. P. Boiler Saving $1500 a month in fuel

and cancelled an order for $2000 worth of blankets.

How much fuel will your building waste this winter?



Department of Public Welfare
CITY OF ST. LOUIS

OFFICE OF
DIRECTOR OF PUBLIC WELFARE
329 MUNICIPAL COURTS BLDG.

The Athey Company,
928 Chemical Building,
St. Louis, Mo.
Gentlemen:--

February 16, 1929.

You will perhaps be glad to know that through the weather-stripping job handled by your people at the City Sanitarium recently, we were able to discontinue the use of one 350 horse-power boiler, a saving to the City of about $1500.00 a month in coal. We were also able to cancel an order for about $2000.00 worth of blankets, which had been requisitioned for use during the present winter.

Feeling that this information would be of interest to you, we gladly submit it.

Yours very truly,

H. L. Dalrymple
Director of Public Welfare.

Send for this book today

It will help you cut down heating expense

Athey Weatherstrips Pay for Themselves in a Short Time

WEATHERSTRIPPED BY Athey

ATHEY COMPANY

6082 West 65th Street Chicago, Illinois

Representatives in Principal Cities

In Canada: Cresswell-Pomeroy, Reg'd., Montreal - Toronto

Children's Wards

MANY of the special problems which are present in a children's ward can best be solved by the use of cubicles, such as those illustrated above. Modern hospital architecture recognizes this fact and WEISTEEL is frequently specified for this purpose in new building.

But the simplicity of WEISTEEL construction, and the adaptability of these cubicles, make it an easy matter to modernize existing hospitals in this respect. An open ward can be quickly, easily and quietly made over into a group of semi-private cubicles which permit segregation, reduce cross-infection and are important aids in the maintenance of quiet.

Our long experience in hospital equipment is at your command. There will be no obligation on your part if you ask us to help you plan an improved arrangement for some of your open wards . . . HENRY WEIS MFG. CO., INC., Elkhart, Indiana.

WEISTEEL

SHOWER STALLS-COMPARTMENTS-CUBICLES

phonograph and microphone pick-up used in conjunction with a basic power amplifier which amplifies the signal sufficiently to carry it by wire to any part of the building desired. At this point, or points, the signal is further amplified by a superpower amplifier, which consists of two rectifiers and two 250 amplifier tubes mounted on a steel chassis and operating on the usual electric light current. The volume of sound may be regulated at each individual amplifier.

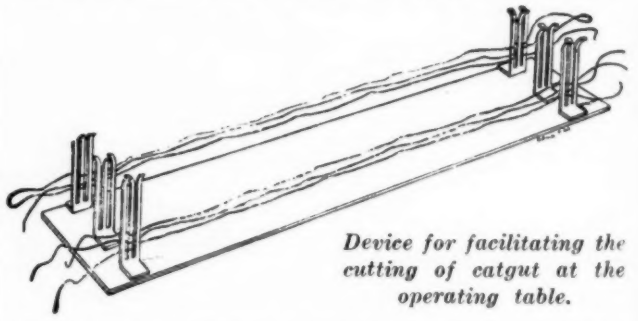
An installation of this type is applicable to many floors as well as it is to one. All the floors may be, and usually are, supplied from the central assembly. When members of the staff are wanted it is necessary merely to cut in with the microphone pick-up and broadcast the name of the person wanted in a low, soft voice. This is heard in all the rooms equipped with loud speakers operated by power amplifiers supplied from the central assembly, just as is the music. The change from radio to phonograph music or to microphone broadcasting is effected simply by means of a three-way switch.

The present units reproduce the original sound flawlessly and amplify it without the slightest distortion. The higher and lower frequencies are so balanced that perfect tonal quality is the result. They are extremely sensitive, precision instruments, designed after the most advanced engineering principles. They are simply and sturdily built and are practical for constant hard usage. Any electrician may make the installation.

A Device That Facilitates the Cutting and Handling of Catgut

By SAMUEL McLANAHAN, M.D.
Assistant Resident Surgeon, Union Memorial Hospital, Baltimore

Recent years have seen no greater contribution to the technical procedures of surgery than that made by a number of commercial firms in developing and in furnishing to the medical profession an improved, dependable catgut at a reasonable cost.



Device for facilitating the cutting of catgut at the operating table.

Times have changed since each institution tediously made its own catgut, which resulted in a product that necessarily varied in its specifications from one lot to another. Now, there is available good catgut of almost any required specification, threaded on needles if desired and supplied in convenient containers. In this form it comes to the instrument table.

At this juncture a procedure that is disproportionately time consuming and troublesome becomes necessary. It is the cutting of the catgut into lengths and storing it for use at the operating table. Any nurse or intern upon whom this duty has devolved knows all too well the embarrassing situations that arise if the catgut is not ready the moment it is wanted. The nurse or intern

RESEARCH PROVES ANTI-RACHITIC PROPERTIES OF COCOMALT

Radiograph of the tibia of a rachitic albino rat showing the wide zone of decalcification, the so-called rachitic metaphysis. From this point on, a fraction of a gram of COCOMALT was fed daily in addition to the basal rickets-producing diet (Ration 2965).

The same bone eight days later showing the beginning of the curative process. Note the deposition of calcium in the provisional zone of calcification.

This radiograph was taken at the termination of the experiment in the ninth week. Recalcification is complete and the animal is pronounced cured.

After many months of research by prominent authorities in the field of nutritional chemistry we are gratified to prove that Cocomalt, in addition to its many other attributes, contains vitamin D, the anti-rachitic vitamin which promotes normal ossification in bones and teeth. Without this vitamin or ultra-violet light, calcium and phosphorus deposition cannot occur, with the result that rickets develop. In addition, laboratory tests show that Cocomalt contains Vitamins A and B. Comparative tests also revealed the fact that Cocomalt contains, gram for gram, about the same amount of the vitamin B complex as raw whole wheat.

Cocomalt is not a medicine. It is a nourishing, easily digestible, natural food with a delicious chocolate flavor. Physicians who experience difficulty in persuading patients to drink milk will find Cocomalt palatable and invaluable.

Cocomalt increases the caloric value of milk 70%. For that reason alone it is useful in diets of convalescents when the physician wishes to build up body weight as rapidly as possible. Served with milk, Cocomalt makes an excellent supplement to the average dietary, adding proteins of the highest biological quality, mineral elements (especially calcium and phosphorus) in the proper proportions and vitamins A, B (complex) and D.

Cocomalt is recommended for convalescents, growing children and adults and can be fed to advantage wherever milk diets are indicated.

Cocomalt

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R. B. DAVIS COMPANY · HOBOKEN, N. J.

AUTH

SIGNALING SYSTEMS FOR HOSPITALS

NURSES' CALL

DOCTORS' PAGING

AUTH ELECTRICAL SPECIALTY CO.
422 E. 53rd Street New York City

Write for New Catalogs of Telephones, Hospital Systems and Annunciators.

A RELIABLE EMERGENCY LIGHT
AN EXCELLENT SPOTLIGHT
A VALUABLE AUXILIARY LIGHT
IN
MAJOR SURGERY

ALL of that and more is the new SCIALYTIC Type H combined Operating and Emergency Unit.

EQUIPPED with its special automatic charging storage battery system, portable, ready at all times for emergency use in case of power failure, yet at the same time performing useful service every day in the operating room, the Type H SCIALYTIC is a necessity in every up-to-date Hospital and physician's office.

OVER 5000 HOSPITALS now enjoy the advantages of SCIALYTIC illumination — the scientifically correct principle of operating lighting.

Send for Booklet No. 6

SCIALYTIC CORPORATION
OF AMERICA
ATLANTIC BUILDING PHILADELPHIA PENNA.

knows, too, how time presses when he or she is setting up tables for the day, or even between cases. This is particularly true of extensive pelvic operations for which there is likely to be a demand for large amounts of catgut of varying sizes. With the hope of facilitating this process in the gynecologic operating rooms of the Johns Hopkins Hospital, Baltimore, a rack has been devised in which the catgut can be placed, cut and stored. It has been in use for almost a year.

Many are the methods already used for preparing catgut. The one that this instrument was designed to supplant consisted of soaking the catgut, stringing each piece out at arm's length, running it from hand to hand until "third-lengths" are estimated, cutting it twice and wrapping the pieces, along with a dozen or more others, in a wet sponge. This was laborious at best.

The device, originally described in the *Journal of The American Medical Association*, Vol. 92, p. 1042, March 30, 1929, consists simply of a brass plate with three pairs of brackets to hold the strands of catgut, each bracket being approximately thirteen inches from its fellow. The principle of the bracket can readily be understood by a study of the accompanying illustration. The manner in which it grasps a number of strands, at the same time presenting the same resistance to each, is the trick of the device. One strand, when pulled, does not drag its neighbor. After being properly soaked, one end of the long piece is inserted in one bracket. The catgut is then carried to the second bracket, back to the first and again to the second, making three strands in all. As many more full lengths as are required, say six, may then be similarly placed. With a single snip of the scissors the loops projecting from the brackets are cut and the catgut converted into third lengths, already arranged and in position for use. Catgut of another specification may be similarly placed in the adjoining pair of brackets, and still another in the third. Wet towels or wet sponges are placed over the catgut. As sutures or ligatures are needed one has but to grasp a free end and draw it. The others remain in position until they are needed. It is to be hoped that this device may serve to make the preparation of the catgut easier and quicker.

The Value of a Social Director on the Nursing School Staff

A social director is a need in the hospital training school, unless the hospital is very small, Minnie Goodnow, R.N., writes in the *American Journal of Nursing.*

In many hospitals a part-time social director is sufficient to provide for the recreational activities of the student nurses, since two or three evenings a week and one afternoon are usually all she has to plan for. Some person or organization may be interested in providing the salary, Miss Goodnow points out, $50 a month for eleven months being a reasonable amount to devote to the happiness and welfare of a school of nursing. An argument in favor of the part-time person is that it is often possible to secure a competent social director at a modest salary. It is often possible to find a person who is employed a short time daily elsewhere, a married woman whose own home does not keep her sufficiently occupied or one with an independent income.

When a social director is engaged she should be given an outline of what the director of nurses may want in the way of social activities for the student.